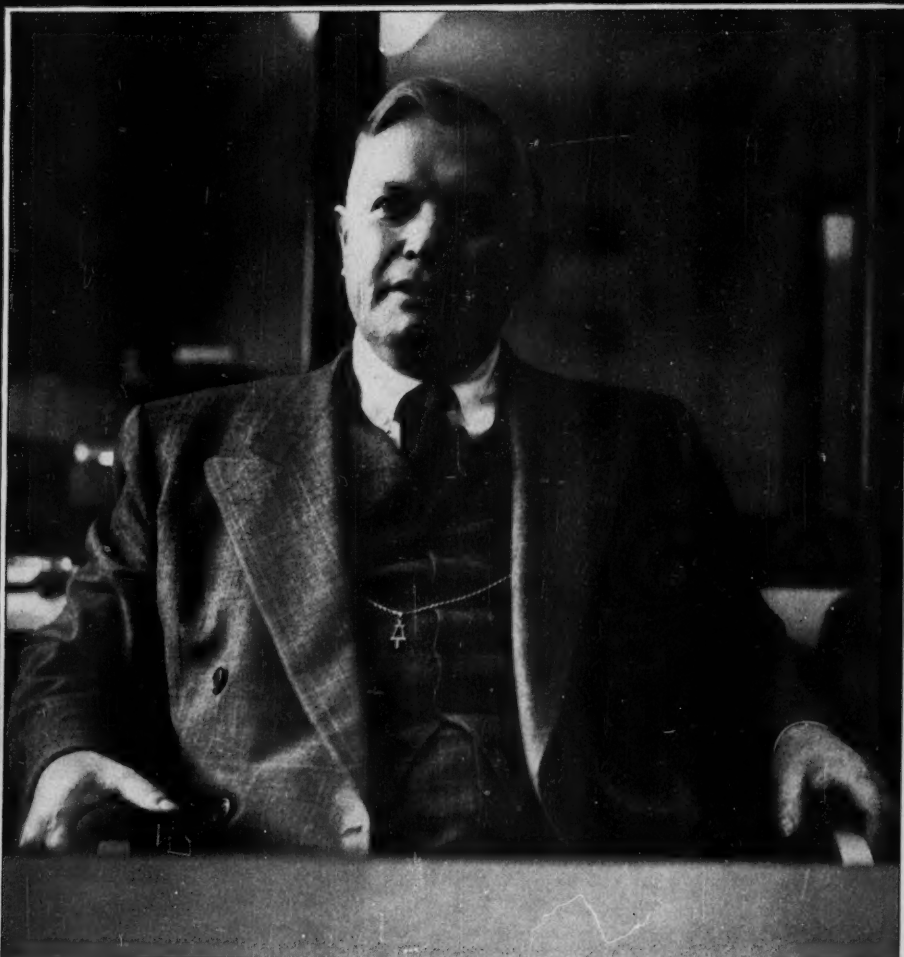


BUSINESS WEEK

Operations Research

WHAT DOES IT AMOUNT TO?

PAGE 62



Walker Cisler: Electricity for war, for Europe, now for Detroit (page 72)

A MCGRAW-HILL PUBLICATION

DEC. 1, 1951

TWENTY FIVE CENTS



Lockheed F-94

TIME... on the line!

Every production minute counts in industry! That's why many thousands of leading plants have used IBM Time Control for over half a century.

With IBM Time Control, timing is right . . . on the production line, in the office, all over the building—without manual supervision.

On-the-line dependability and accuracy are yours—every minute—with IBM time!

IBM time equipment includes Electronic and Electric Time Systems, Program Signaling Systems, Nurses' Call Systems, Recording Door Locks, Tower Clocks, Athletic Scoreboards and Timers, in addition to the products illustrated at the right.

INTERNATIONAL BUSINESS MACHINES

IBM

TRADE MARK



Time Stamp



Consecutive Spacing Recorder



Cost Recorder



Master Time Control



Signal



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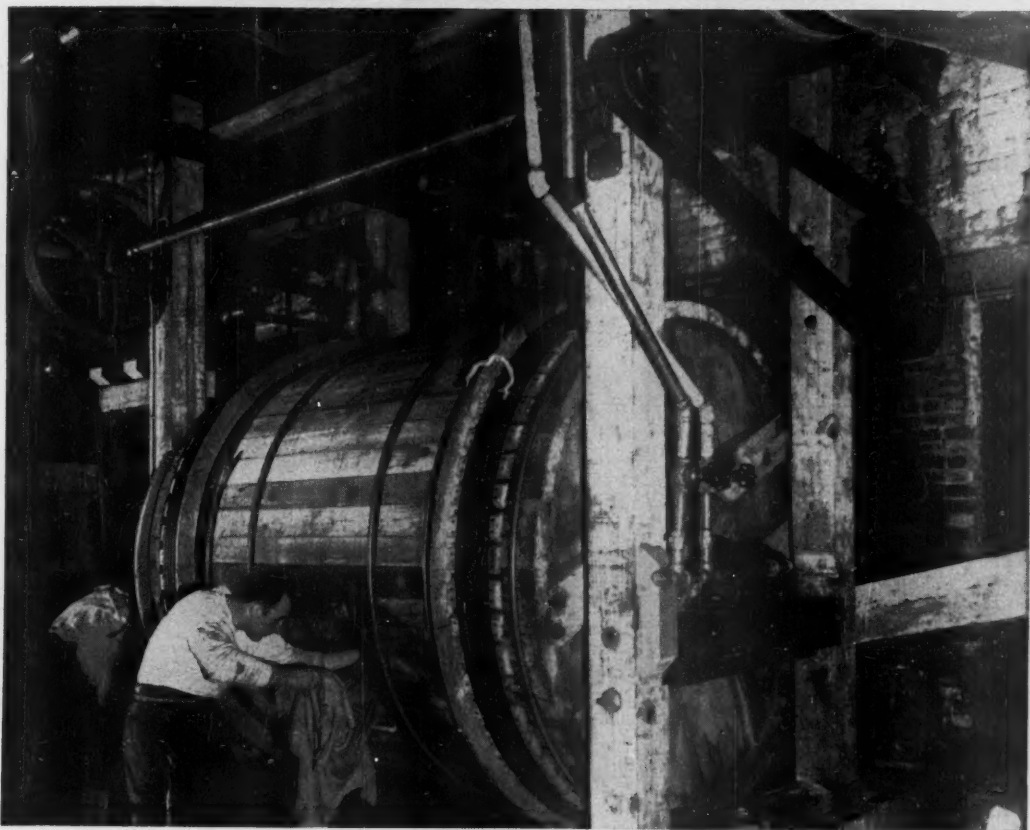


Indicating Clock

RESEARCH KEEPS

B.F. Goodrich

FIRST IN RUBBER



Two-ton drum beat soft-pedaled by rubber

A typical example of B. F. Goodrich product improvement

THEY put raw hides into that big drum and as the drum turns, the hides are tossed around in acid, being tanned for upholstery. But turning the drum was a problem. With complicated sets of gears the noise was nerve-racking, the vibration damaging to equipment. Tough on workers, expensive too.

Someone thought of using V belts to turn the drum. Engineers agreed that V belts would be quiet but knew no ordinary belt would stand the strain. Then they heard of the B. F. Goodrich grommet belt—a different kind of

V belt developed and made only by B. F. Goodrich. These belts are so rugged that the engineers simply put the belts around the drum—the running belts turn it. The banging and clanking was changed to quiet rhythm and there was no more vibration—grommet belts absorbed the shaking and jerking, turning the drum like a smooth-running wheel.

A grommet is a tension member inside the belt. It's made like a giant cable except that it is endless—a cord loop made by winding heavy cord on itself. There are two grommets in a B. F. Goodrich V belt. They

stand the shocks and heavy loads, also make the belt flexible.

The grommet belt is a typical B. F. Goodrich improvement—an improvement that saves money, does jobs better for industries of all kinds. It's the result of day-by-day research and it's a good reason for you to get in touch with your local BFG distributor when you need industrial rubber products. *The B. F. Goodrich Company, Industrial and General Products Division, Akron, Ohio.*

B.F. Goodrich
RUBBER FOR INDUSTRY

What's a Little Ice?

The Power Stayed On!

NATURE is getting to be less and less of a match for those who produce and distribute America's electric power.

Their determination to keep service intact, plus steady advances in design and construction of electric power equipment, make a tough combination to beat.

Last year they produced a record 329 billion kilowatt-hours of electrical energy—more than double the 1940 output. And by 1955, U. S. A.'s demands for electricity are expected to be at least 25% greater.

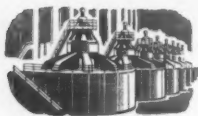
Count on Allis-Chalmers to help electric power output grow!

Every year, more and more Allis-Chalmers steam and hydraulic turbines, generators, distribution and control equipment are going into service throughout the country.

Today, Allis-Chalmers builds basic machinery for *all* industries, and so aids your welfare and good living in every way.

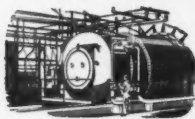
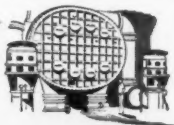
ALLIS-CHALMERS MANUFACTURING COMPANY
Milwaukee 1, Wisconsin

Improved Electrical Equipment like this from A-C Helps Bring Better Living to You . . .



More power for national defense to come from Hoover Dam. Two Allis-Chalmers hydraulic turbines and generators now building will complete original planned capacity.

Condenser—one of four in Ohio power plant. Unusual oval shape saved space and building costs by making possible minimum height between turbine and basement floor.



Wasted energy is saved by Allis-Chalmers synchronous condensers which improve power factor in utility and industrial power systems. Units often repay cost in a very short time.

PROSPER WITH POWER!

America's strength, prosperity and good living have been paced by rapidly expanding generation and utilization of electric power.



ALLIS-CHALMERS



Machinery that Aids all Industry—
Furtheres American Good Living!



The NEW TOWMOTOR...

industry's handling headliner!

There's nothing but good news about handling costs when the NEW Towmotor line-up makes the headlines. Five new Towmotor models add greater-than-ever versatility to every phase of handling in America's most important industries. New features assure greater maneuverability; new design provides increased stability with full rated loads. Pneumatic, cushion or solid rubber tires provide speed with safety over any type of surface, inside or out. Capacities: 2,000-3,000 and 4,000 lbs. Complete details of the NEW Towmotor are clearly shown in a new 15-minute film, "WHAT MAKES IT TICK." It's available now for a showing in your office at your convenience. Plan now to see it. *Send the coupon today!*

SEND COUPON TODAY for a showing of "What Makes It Tick" in your office. 15 minutes of helpful information with no obligation to you!

TOWMOTOR
THE ONE-MAN-GANG

**FORK LIFT TRUCKS
and TRACTORS**

RECEIVING • PROCESSING
STORAGE • DISTRIBUTION



HOW MANY PEOPLE HAVE YOU TALKED TO ABOUT AMERICANISM TODAY?

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Div. 2, 1226 E. 152nd Street, Cleveland 10, Ohio

I want more information about the NEW Towmotors. I would like to see "What Makes It Tick" in my own office. Please send details.

Name _____

Company _____

Address _____

City _____

State _____

Representatives in all principal cities
in U. S. and Canada

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BUSINESS WEEK • Dec. 1, 1951



THIS HARD-TO-REACH SET SCREW IS EASY NOW

AN APPLICATION OF KELLER AIR TOOLS

Tightening the set screw that holds fan to motor shaft used to be a difficult job in assembling this Trane unit heater.

Completely surrounded as it is by coils, the only access to the set screw is through the fan blades. Running down and tightening it with a hand wrench was slow and tedious ... hard on knuckles as well as patience.

Since changing to an air-powered Keller Ratchet Wrench, fans can be attached about three times as fast. The wrench reaches between the blades easily, and runs down the screw to a torque setting determined by an air line pressure regulator.

Equally important, the Keller Wrench tightens the set screws to a more uniform

torque than ever was possible with any kind of hand tools. Now each screw is tightened quickly and securely to exactly the tension desired.

Keller Air Tools are widely used for drilling, grinding, hoisting, riveting, driving screws, and setting nuts. By making difficult jobs easy, they speed production and reduce manufacturing costs.



Air Tools engineered to industry

KELLER TOOL COMPANY, GRAND HAVEN, MICH.

AIR MOTORS • AIR HOISTS • AIR HAMMERS • COMPRESSION RIVETERS • GRINDERS • DRILLS • SCREW DRIVERS • NUT SETTERS

Bigger Biceps for Bunyan

When they say *t-i-m-b-e-r*,
Twin Disc takes over ... for
out in the Paul Bunyan coun-
try, too, the preferred har-
ness for production power is
a Twin Disc Hydraulic
Torque Converter, Hydraul-
ic Coupling or Friction
Clutch Drive. The men who
know logging equipment—
yarders, loaders, donkeys
and tractors—know that no
other can match Twin Disc's com-
plete line of friction and hydraulic
connecting links ... nor match
Twin Disc's 33 years of specialized
experience in applying them in every
industry.

That's another reason why Twin
Disc plays so important a part in
America's productive might.

...and Twin Disc applies
the production-power!

This is a Twin Disc Three-Stage Hydraulic Torque
Converter ... an industrial fluid drive which answers
the demand for more productive effort by
multiplying the working torque of an en-
gine by as much as five times. Offered in
models to handle from 40 hp to 1000 hp.

TWIN DISC
CLUTCHES AND HYDRAULIC DRIVES

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

In BUSINESS this WEEK ...

• More People ...

... are still swarming out to the West Coast. And so Pacific Telephone & Telegraph is laying out a cool \$1-billion to keep up with its market. P. 94

• More Substitutes ...

... are getting a lot of manufacturers off the hook on materials shortages. Some of them may be permanent. P. 26

• More Women ...

... in the labor force look like the answer to the coming squeeze on manpower. But nobody really knows much about using womanpower. P. 30

• More Building:

If you can't get steel, maybe you can use prestressed concrete and go ahead anyhow. P. 105

• More Dope ...

... on what makes a business tick. That's what the new science of operations research promises to lay on the line. P. 62

• More Trouble ...

... is cooking for Western Europe. France is headed for another economic crisis. P. 149

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Little does he know...



AND little would he care, for that matter, that his favorite toy auto is made from scrap plastic left over from refrigerator freezer compartment doors.

But there's a man who *does* know and *does* care. He's the toy manufacturer who has discovered what DPi high vacuum coaters can do for his sales curve. In these coaters, he can put a beautiful metal lustre on just about any plastic product. It makes no difference if he uses a reclaimed plastic that's a bit off-color, because it's covered beautifully by its new metal coat. And cost-savings are obvious.

With the prospect of a plastics scarcity facing us, this idea of metalizing scrap plastic takes on added importance. In many cases, it may mean the difference between having and *not* having a product to put on the market!

Products already using this high vacuum metal-coating process range all the way from toys and emblems to radio housings, flashlight reflectors, and light-switch shields. The idea, naturally, also has important scientific and engineering applications these days, apart from decoration.

If you'd like to know more about

the DPi coating equipment that makes all this possible, write for our new data sheet which gives the engineering details. That, and an article discussing the technique and economics of metal coating on plastics are yours for the asking. Write **Distillation Products Industries**, Vacuum Equipment Dept., 739 Ridge Road West, Rochester 3, N.Y. (Division of Eastman Kodak Company).

**high vacuum research
and engineering**



*Every Second the Clock Ticks
Over \$5 in Productive Time is Lost
from Industrial Eye Accidents!*

You Can Prevent 98 %
of these Accidents
with Safety Goggles
averaging \$2.30
in cost

The annual cost of industrial eye accidents in *lost productive time* alone is estimated at \$160,000,000—or about \$5 every second the clock ticks. In *lost man power* this represents the equivalent of 55,000 skilled workers who could be added to the productive work force each year if Eye Protection Programs were installed universally.

With skilled workers becoming increasingly short, it will pay you to look into the labor conservation and money-saving opportunities that an AO Eye Protection Program

can provide. Your AO Safety Representative can show you case history after case history in your own or allied industries where such a program has paid off in *greater output and lowered costs*. Ask him to call.

FACTS TO REMEMBER:

Industrial eye injuries cost over \$5 per employed worker per year — with compensation averaging \$328 per injured man even in the low-cost year of 1938.



SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES

BUSINESS OUTLOOK

BUSINESS WEEK
DECEMBER 1, 1951



The longer business moves sidewise, the surer it seems that any change in direction will be upward.

The comparatively even level of output means that swollen inventories are being worked off without much impact on the economy.

Industrial activity now is just about where it was at the beginning of the year—in fact, where it has been all year except for the mild summer dip.

But that generalization covers up a good deal of what actually happened.

Production, already at a postwar peak when Korea was invaded in mid-1950, rose 10% in six months—and stayed there throughout the first half of 1951.

But neither consumer nor military expenditures surged so rapidly as output. A large part of the added production went into inventory rather than into soldiers' or civilians' hands.

In the second half of the year the reverse was happening. As retailers worked off stocks, the movement of consumer goods from the assembly lines was less than what people were buying. Production kept up only because arms output was rising.

But for the overstocking, production now would be increasing steadily.

A look at factory employment shows how excessive inventories and arms building left their mark on industry.

Manufacturing employment in October was 15.8-million. That's 100,000 less than the year-ago figure.

The dip is more than accounted for by civilian industries. The number of workers in furniture, lumber, textiles, and apparel is off from 1950.

On the other hand, employment in armament and capital goods is well over the year before. In ordnance, employment has doubled.

The hours that workers are on the job reflect the general sluggishness.

In October the factory work week was 40.4 hours. That's an hour a week less than last year.

The economy should soon head for new highs, even if consumer demand does not pick up much from present levels. Here's why:

- Arms output will be increasing substantially after the first of the year.
- Cutbacks in materials for consumer durable goods—though large in terms of "base period" production—will not be much below present rates.
- New facilities will be coming into use steadily. A lot of the estimated \$25-billion that industry is spending on expansion in 1951 will start producing soon.

The insatiable demand of industry for machines to equip new plants is drastically affecting the machine tool business.

Shipments in October were 121% over the 1945-1947 base—up 12% in one month.

That's the highest rate of deliveries since 1943. And even at that clip, it will take almost two years to work off the order backlog.

While a future gain in business is a good prospect, the present facts of life show no real movement upward as yet.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

DECEMBER 1, 1951

The National Assn. of Purchasing Agents finds that industrial activity in November did not change much from October.

But, significantly, the purchasing executives expect prices to go up. And they say that inventories are as low as they can go.

•
Metal cutbacks are having less effect on auto output than the auto makers supposed.

When the National Production Authority first set the fourth-quarter allocations, car manufacturers said they would be able to turn out only about 900,000 units.

But during October and November the assembly lines rolled out around 750,000 passenger vehicles. By yearend the total should easily hit 1.1-million—the absolute maximum that NPA will allow.

•
One of the primary outlets for savings is beginning to shrink.

The number of new mortgages on homes is finally diminishing as housing starts stay well under a year ago.

For the first five months of 1951 mortgages were running 16% ahead of the year before. But ever since midyear mortgages have been dropping behind 1950 figures more and more.

In September only \$1.3-billion went into nonfarm home loans—13% under last year.

In the first nine months of 1951 new mortgages soaked up \$12.2-billion in savings.

•
One thing to remember about the softness of prices over the last eight months: It was a phenomenon that took place almost entirely at the whole-sale level.

Retail prices, except for a few distressed lines, wavered only slightly.

•
Since last January the consumers' price index has climbed six points to a new high of 187.4.

Maybe that doesn't sound like much for a nation that is rearming. Yet at present rates of consumer spending, a 3% rise in prices means that people must spend \$6-billion more for the same goods.

•
Statistics on cotton consumption in October might lead you to believe the industry had an important revival last month.

Domestic use was 905,000 bales. That was the best since April and compares with 837,000 a year earlier.

Those comparisons, however, are deceiving. October this year had an unusual number of working days—24¾ to be exact. So, when you translate to average consumption per working day, it's a different story.

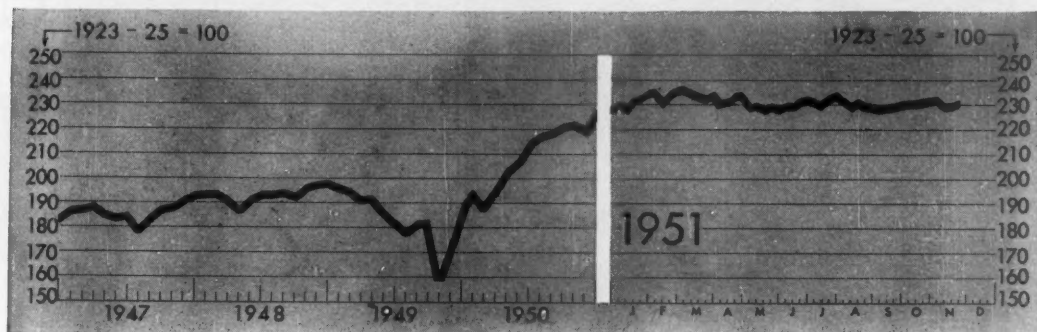
Average use in October was 36,568 bales a day. That was a shade lower than September's 37,026 and compares with 42,369 a year earlier.

•
The farm price support opponents have a natural in the potato crop.

In 1950 potatoes were under price support. Uncle Sam had to pick up 100-million bu. out of a production of 440-million bu.

The supports were abandoned for the 1951 crop. The estimated production is 336-million bu., down by almost exactly the amount of last year's surplus.

FIGURES OF THE WEEK



Business Week Index (above) *232.1 †231.0 233.4 224.8 173.1

PRODUCTION

Steel ingot production (thousands of tons).....	2,079	2,073	2,089	1,576	1,281
Production of automobiles and trucks.....	80,489	†120,767	121,215	122,683	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$35,435	\$36,758	\$33,950	\$36,924	\$17,083
Electric power output (million kilowatt-hours).....	7,157	7,333	7,234	6,508	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	5,888	†6,232	6,340	5,888	4,751
Bituminous coal production (daily average, thousands of tons).....	1,984	†1,907	1,893	2,001	1,745

TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars).....	77	76	84	81	82
Carloadings: all other (daily av., thousands of cars).....	58	56	64	58	53
Department store sales (change from same week of preceding year).....	+2%	†+7%	+10%	+8%	+30%
Business failures (Dun and Bradstreet, number).....	149	109	155	146	217

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	456.9	†457.9	457.6	479.5	311.9
Industrial raw materials, daily index (U.S. BLS, Aug., 1939 = 100).....	315.9	†316.2	315.3	336.5	198.8
Domestic farm products, daily index (U.S. BLS, Aug., 1939 = 100).....	357.7	†360.6	356.5	359.4	274.7
Finished steel composite (Iron Age, lb.).....	4.131¢	4.131¢	4.131¢	3.837¢	2.686¢
Scrap steel composite (Iron Age, ton).....	\$42.00	\$42.00	\$42.00	\$40.75	\$20.27
Copper (electrolytic, Connecticut Valley: lb.).....	24.500¢	24.500¢	24.500¢	24.500¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.54	\$2.54	\$2.48	\$2.24	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	42.23¢	†41.73¢	37.77¢	42.95¢	30.56¢
Wool tops (Boston, lb.).....	\$2.23	\$2.40	\$2.45	\$3.35	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's).....	178.5	†180.7	180.7	158.4	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.58%	†3.56%	3.54%	3.21%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	2½%	2½%	2½%	1½-1½%	3-1%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	52,357	52,249	52,251	49,850	††45,210
Total loans and investments, reporting member banks.....	72,652	72,526	72,606	69,668	††71,147
Commercial and agricultural loans, reporting member banks.....	20,872	20,848	20,472	16,988	††9,221
U. S. gov't and guaranteed obligations held, reporting member banks.....	31,524	31,457	31,940	33,306	††49,200
Total federal reserve credit outstanding.....	24,745	24,602	24,841	20,162	23,883

MONTHLY FIGURES OF THE WEEK

Cost of Living (U. S. BLS, 1935-39=100) Old basis.....	October.....	187.8	186.5	174.8	139.3
Wholesale prices (U. S. BLS, 1926=100).....	October.....	178.2	177.6	169.1	121.1

*Preliminary, week ended Nov. 24.

††Estimate (BW—Jul. 12 '47, p.16).

‡ Date for "Latest Week" on each series on request

† Revised.



HER FUTURE IN HER HANDS...

What future — for a woman who lost four fingers from one of the hands with which she earned her living? That's what Mary Murphy* wondered after her hand slipped between the cutters of her machine and came out badly maimed. The fear of a lifetime of helplessness and disfigurement was even worse than the pain.

The solution

After receiving the best medical care, Miss Murphy went to the Liberty Mutual Rehabilitation Center in Boston. There she learned to use a specially made index finger, or at other times a plastic hand — and to live with them. Today, a "whole person" in the ways that matter, she's back at her job... earning her living... enjoying her hobbies, knitting and even needlework... looking forward to a driver's license!

HUMANICS: A new concept

Rehabilitation of the seriously injured is only one phase of Liberty Mutual's comprehensive program. Called HUMANICS, it brings together all ac-

tivities for preventing accidents and reducing the disability and cost resulting from accidents.

HUMANICS guards machines... and helps put "invisible guards" around workers to prevent them from hurting themselves. It concerns itself with the medical care of injured workers and the rehabilitation of the badly injured. The prevention of loss in all forms and the consequent reduction of compensation insurance costs is the basic business of Liberty Mutual.

You can check your own program

"**HUMANICS**: A new concept of loss control in industry" describes five ways to reduce the cost of Workmen's Compensation Insurance, increase productivity and improve employee relations. A request will bring you a copy without cost or obligation. Address Liberty Mutual Insurance Company, 175 Berkeley Street, Boston 17 or the nearest branch office.

*Although a fictitious name is used, this is an actual case.

HUMANICS

INCLUDES

Industrial Engineering to eliminate physical and mechanical hazards, establish safe methods and practices.

Industrial Hygiene to assure a healthful working environment.

Industrial Preventive Medicine to protect the worker's physical fitness.

Claims Medical Service by eminent specialists to facilitate the rapid recovery of injured workers.

Rehabilitation to restore badly injured workers to productive lives.



We work to keep you safe.

Better Compensation Insurance Protection at Lower Cost ★ through HUMANICS

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
DEC. 1, 1951

A
BUSINESS

WEEK

SERVICE

The debate over guns vs. butter is warming up. It will get hotter as affairs in Korea and Western Europe force a review of the whole mobilization program.

Repeated evidence of a lag in arms making is causing Washington to talk of getting tougher. Heretofore, the prevailing view has been that the bottlenecks were temporary and could be broken as they came along. But now the mobilizers are beginning to doubt that one-shot cures will work much longer.

Either we lower production goals, or we deliberately get tougher, they say. That's what aircraft production boss William Boyer admitted when he cut back aircraft schedules. In other weapons programs, schedules are being tailored to fit the facts of life.

Boyer would like to get tougher, too. So would the Joint Chiefs of Staff and the Pentagon procurement people. They are the ones who get criticized for slow deliveries.

Eisenhower is also throwing his weight on the guns side. He wants more arms faster to build up Western Europe.

And Sen. Lyndon Johnson, the congressional preparedness investigator, cries for guns ahead of butter loudest of all. His report this week proposed one production czar to prod the Pentagon (page 19).

But mobilizers Wilson and Fleischmann still hold to their original blueprint—produce the weapons, but also expand industrial plant and keep civilian activity at least at a breakeven point. Of course, they will give overriding priorities on, say, machine tools for jet engines.

But they won't yet agree to shutting off civilian business. This means, of course, that the mobilization period will be stretched out. Already the Defense Production Administration and the National Production Authority are soft-pedaling their former promises that by next year's third quarter there can be some easing up on metals for civilians.

More planes and more weapons for Europe will take any new metal capacity. Every pound of aluminum to come from added plant already is being earmarked for the military. And this week's award of more CMP metals to schools, hospitals, and roads—drawn from reserves for hardships—will have to be met in the second quarter either by cutting other non-military users or by eating into reserves once more.

Either way, the businessman's hope for more metal is dimmed. Don't look for relief in 1952.

Go slow on substituting for copper. NPA had been plugging a switch to aluminum because the outlook for that metal is much brighter than for copper. But the government hadn't figured that retooling for, say, the bands that hold pencil erasers could be done before late 1952. Instead, some businesses geared up right away. Now NPA, red-faced, can't deliver.

Backlogs of salary and wage cases are going to shrink soon. Policy decisions on bonuses will wipe out a big chunk in one sweep (page 23). Opening of regional Salary Stabilization Board offices will relieve the burden on Washington. (From another angle, this move will let employers know what they can do sooner.)

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
DEC. 1, 1951

The biggest wage board backlog is welfare and pension cases. WSB is now considering health and welfare apart from pensions, so some simplification of the tangle is due.

Salary rules for new businesses and added plant are SSB's biggest job. Its policy is that you can pay comparable salaries for the area, then send the payroll into the board. Any turndowns will be made in three weeks.

More trading of U.S. steel for foreign metals is in the works. DPA boss Fleischmann figures to get some tin, copper, and lead the way he got 11,000 tons of aluminum from Britain by swapping 81,000 tons of steel.

European nations have been cold to much exporting of strategic metals. They weren't lured by U.S. offers of sulfur and molybdenum. But when Fleischmann dangled steel on his recent trip, he found the nations willing to talk.

The chunk of aluminum obtained for steel doesn't look like much. But this is what it means to fabricators: NPA had decided to cut aluminum allocations as much as 90% below the base period for least essential users; the British trade eased the slash to a maximum of 80%.

Inflation talk will be soft-pedaled in next month's economic report. Keyserling and his Council of Economic Advisers figure any real danger is quite a spell off. A year ago this group strongly warned of a threatening spiral in early 1952. They don't say what changed the prospects, but figure most of the lull resulted from unusually light demand for consumer durables.

The council report also will plump for Truman's Fair Deal—but in selected lots, rather than wholesale.

A guide for businessmen on renegotiation of defense contracts is out (page 136). You can get it by writing the Renegotiation Board, Dept. of Defense, Pentagon, Washington 25, D. C. Instructions on how to file financial statements will be published soon.

Worry over scandal in government is widening in the Truman ranks. The New Deal wing—Americans for Democratic Action—this week asked Truman to set up a bipartisan prosecution of the sort President Coolidge used to clean up after the Teapot Dome scandal.

Scandal in military procurement is the new worry. Already more than \$19-million in Air Force contracts have been canceled because of charges of influence, favoritism, and fraud. A congressional investigation will open on-the-spot hearings at Dayton's Wright-Patterson Field Dec. 10.

These Democratic troubles were the backdrop for Democratic Chairman McKinney's maiden speech in New York. He promised to clean up, promised Truman would help him. Note: Truman isn't trying to blink away the scandals anymore. His firing of Assistant Attorney General Caudle was quick when another mink coat came into sight.

Things are bad, the Democrats admit, but not hopeless. They console that the Republicans won in 1924 in the face of the Teapot Dome uproar.

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THE TOUGH JOBS GO TO TEXACO

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● Sen. Lyndon Johnson's watchdog committee blasts Pentagon for poor production record.

● Its latest report charges that defense is getting too little, civilian goods too much.

● Defense Dept. is accused of complacency over its weak results, and of trying to cover them by revising production schedules downward.

● The report says that both tank and aircraft output are below minimum levels of security.

● Too many machine tools have been left for nonessential users, and too much of scarce materials.

● Still, Johnson says that our limited mobilization leaves some room for civilian production. And so he hedges from his demand for . . .



"No More Butter—Till We Get the Guns"

The Pentagon's hardest-hitting critic in Congress is Sen. Lyndon B. Johnson, of Texas. As chairman of the Preparedness Subcommittee of the powerful Armed Services Committee, Johnson for over a year has been nipping and snapping at the bureaucrats, civilian and uniformed, who top off the pyramiding U. S. military establishment.

• **Blasts**—Johnson's reports have put the needle into a dozen sore spots—spots that needed attention from the Congress:

• He blasted the Munitions Board for its lethargy on stockpiling nickel, tin, tungsten, and rubber.

• He pressured officials who were fumbling the stepup of synthetic rubber production in government plants.

• He put a stop to the government's paying any asking price for tin. When RFC acted on his report, it knocked the tin market for a loop.

This week Johnson's committee turned out a report—its thirty-fifth—

that criticized the "guns and butter" policy that runs through the heart of the whole mobilization program. Johnson says the Pentagon has been too complacent about a poor arms production record. From here on out, arms output should come ahead of absolutely everything, until the "minimum goals of military strength" are in being.

I. The Charges

Specifically, Johnson charges:

• Production performance on tanks, planes, and other military end-items "has been very disappointing." Both tank and aircraft output are "substantially behind the schedules necessary for the minimum levels of strength considered safe by our strategic planners." Johnson blames it on a lack of "courage to put guns ahead of butter."

• An "inadequate" number of the existing machine tools—the key bottleneck of them all—has been taken out of nonessential civilian production.

Not enough scarce materials have been diverted from nonessential end-uses.

Johnson's main remedy for all this is a procurement czar in the Defense Dept. reporting directly to Secretary Robert Lovett. Johnson favors either a new Undersecretary with this authority or a delegation by Secretary Lovett to Munitions Board Chairman John Small of enough powers to cope with the job.

• **But Then Again**—As a matter of fact Johnson includes language in his report that takes some of the edge off his strong "guns ahead of butter" stand. At the outset, he notes: "It is clear that . . . in the limited type of mobilization now under way we can and should have both butter and guns." But, he adds, "someone must realistically determine the proper proportions or run the risk of jeopardizing our security."

This "determining of proper proportions" of guns to butter is, of course, the job of Defense Production Administrator Manly Fleischmann, mobili-

zation chief Charles E. Wilson, and President Truman. The current report carefully skirts any direct reference to this key fact.

Furthermore, while the report sounds rough and tough for all-out arms output, key Johnson aides admit, "we don't say that you have to shut up the auto and refrigerator industries. There's ample room for plenty of civilian production. . . . We're not for shutting up any industry."

II. Revising Schedules

Johnson charges that delivery schedules are being revised downward to make performance look better. To back that up he cites an April 4 Defense Dept. procurement report that set hard goods deliveries for April-June quarter at more than \$2.1-billion. Actual deliveries turned out to be less than \$1.5-billion. "Aircraft dollar deliveries were approximately 34% short of the goal; guided missiles 70% below expectations; tank deliveries 40% below; and electronics 30% behind the target."

Defense Dept. planners say that the schedules were purposely optimistic, since such schedules "in any period when the objective is to expand output . . . should never undershoot the mark for items that are difficult to produce." Furthermore, the Pentagon's procurement experts noted that schedules must necessarily be established according to producibility, program balance, and relative urgencies.

• **Airframe**—It was precisely this point that Harold R. Boyer, chairman of the Aircraft Production Board, made this week. He announced that "airframe production is being rescheduled to fit more exactly the actual deliveries of engines, thus forestalling any possibility of being forced to accept airframes without engines in attempting to achieve unrealistic production schedules."

Boyer claimed that holding down airframe production now is wiser than permitting frame production to continue to outstrip engines. Failure to hold down airframe output would put a terrific strain on the industry later on when it would have to be geared back from a much higher level of operations than it now has . . . and then geared up again as jet engine output caught up.

Boyer lays the blame on "what we didn't do 16 months ago." The current bottleneck: shortage of machine tools for engine production.

• **Indignation**—Johnson gets pretty righteous about this sort of thing. "When a minimum supply of weapons is essential to national security, delivery schedules . . . must be maintained," the report reads. "To change

schedules is to prolong the period during which the security of the country is in danger. Under these circumstances, to revise a schedule downward to accord with production failures and then to state that production is on schedule is little short of a fraud on the nation."

III. Who Says It?

It's hard to overestimate the importance of the tall, black-haired bundle of nerves who holds the job of head gadfly to the defense effort. Few experts, Johnson himself least of all, forget that he is following in the World War II footsteps of a senator named Harry Truman.

Right now there's nothing in Johnson's actions to contradict a yen for the vice-presidential nomination. He disclaims aiming for headlines, but his reports are prepared by a skilled pro and team with catchy phrases.

The Texan likes to say that his committee is saving huge sums for the taxpayers—more than a billion dollars in the synthetic rubber program alone. He stresses that America needs every ounce of strength—leaning to the idea that war is inevitable. And he has an occasional kind word for preventive war.

• **Voting Record**—These firm and direful views haven't obscured the keen political eye of the senator, according to his voting record compiled by the AFL and the Council of State Chambers of Commerce. On price controls, he voted against slaughtering quotas and commodity price rollbacks. Generally, he has been on the side of big federal spending.

He voted for starting eight new Interior Dept. projects to cost \$12-million this year, \$300-million ultimately. He voted against cutting back agriculture conservation subsidies from \$280-million to \$150-million and against cutting back on rivers and harbors.

• **What's to Come**—Next month, Johnson is due to reap another bumper crop of headlines, with two more reports.

One of them will deal with scandal hearings at Wright-Patterson Air Force Base at Dayton. There will be open hearings on charges of favoritism, influence, and fraud in the awarding of contracts.

Businessmen will be particularly interested in the other report. It will deal with business profits, industry by industry, company by company. Johnson has criticized business profits in World War II. The committee staff is now digging in Securities & Exchange Commission files for data on sales, profits before and after taxes, and net worth. It will all come out in an eight-part report.

The 1 Cars on the road

Their Age	Their Number
Less than 1 year	2,989,000
1 to 2 years	4,935,000
2 to 3 years	3,033,000
3 to 4 years	3,052,000
4 to 5 years	2,032,000
5 to 8 years	none (war years)
8 to 9 years	999,000
9 to 10 years	3,955,000
10 to 11 years	3,033,000
11 to 12 years	2,244,000
12 to 13 years	1,490,000
13 to 14 years	2,709,000
14 to 15 years	2,074,000
15 to 16 years	1,053,000
16 to 17 years	567,000
17 and older	1,000,000

Auto Supply

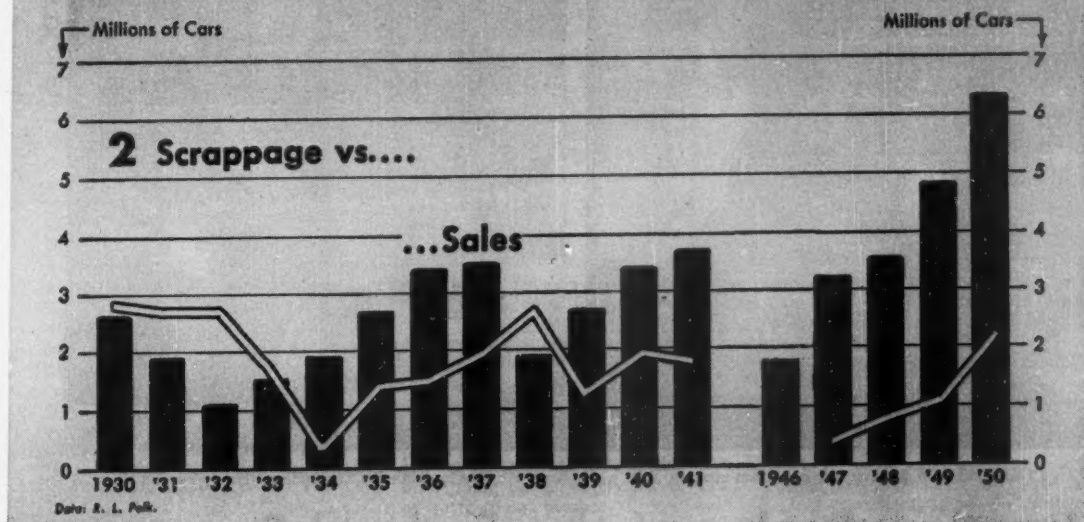
By next spring, you may find it about as hard to get a new car as you did in the hectic spring of 1949, when the automobile market was in its last post-war squeeze (BW—May 7 '49, p.19). Barring a sudden relief in materials or a sudden collapse of demand, the statistics point to a shortened supply ahead.

Underlying the market are two very basic facts: (1) There are still several million cars on the road that, by normal standards, are beyond replacement age. (2) In recent years, as the total of cars in use jumped, scrappage hasn't kept up with replacement production. These two factors make a continued good new car market a statistical necessity.

But statistics on a subject as flexible as car life expectancy are not so firm as insurance mortality tables. They can often be a mirage, as the long wartime life of cars in 1941-45 proved. This time, though, current conditions in passenger car marketing put weight behind the statistics.

• **Tight Supply Ahead**—Dealer stocks have been gently falling off since last April, mainly because of production limitations. There are still plenty of cars to go around, but coming April may tell a different story. Auto men know that their first- and second-quarter schedules, as now defined, won't

Auto Market:



Heading for a Squeeze in Early 1952

build inventories fast enough for the usual spring buying rush. After that, the extent of production limitations will tell whether the anticipated tight supply will carry on into later 1952.

Field stocks of finished automobiles—cars in dealer hands or in transit—run today from a four- or five-week supply down to as little as a 10-day level. The average is somewhere around three weeks. This level is well below last spring's average supply of about five weeks.

• **Balance**—Domestic production schedules for domestic markets are just balanced with retail deliveries today: Some 335,000 assemblies were made for U.S. markets in November (the official figures will appear in a month or so); sales probably were nearby. No significant change is expected in field stock balances over the next month or two—diminished output will be countered by diminished seasonal demand.

By the time 1952 is in full swing, however, the figures will tell another story. Output reductions in the first quarter will be followed by still more in the second. Meanwhile, if seasonal expectations develop on time, the retail market will begin to edge up next March and will point toward a peak before summer. The result then: definite tightness in car availability.

After that? It's anyone's guess. You

can talk to auto men who think that by spring steel salesmen will be out trying to peddle tonnage. And at least a few steel men agree. Would that relieve quota restrictions? It might. But if copper and other defense materials continue as tight as they are today, extra steel won't help at all.

• **Military Head-Hold**—The best bet seems to be that, while the military program continues, enough materials will be short so that output restrictions will stay pretty tight. Presently, Detroit is figuring on no more than 4-million cars next year (of which 5% or so will be exported). Washington is inclined to agree, but figures that in any case the rock bottom total will be 3.2-million.

Neither of those figures will come near meeting the strapping postwar demand, if it continues at its present level. Higher prices will cut into orders, to be sure. Higher taxes, too, will shave off another segment. But auto men are betting their shirts they'll be able to sell everything they build in 1952.

That's the factory viewpoint. The dealers aren't quite so optimistic, but they've been undergoing a gradual and collective change of mind in the past several weeks. One indication is the way the extreme price discounting that prevailed in September is letting up.

• **Secondhand Picture**—Used car dealers (and the secondhand lots of the

new car outfits) are lagging somewhat behind the new car picture. Prices are definitely soft today on secondhand cars, particularly the recent models. This is a continuation of the picture that has been dogging the trade-in people all this year.

• **Threat**—In that situation, incidentally, lies the dormant seed of what many keen analysts of the retail market figure may someday upset it. The analysis goes like this:

(1) The bulge of used car models of recent vintage means that much of the new car business is from people who traded in fairly new cars.

(2) As long as new cars are hard to get, recent model used cars move at comparatively swollen prices.

(3) But once new cars are fairly easy to get—as they have been recently—the market for recent model used cars dwindles.

(4) When that market dwindles, trade-in prices slide, too.

(5) With those trade-in prices deflated, the consumer takes a bigger loss when he trades in a recent model car on a new one. And once this begins to happen, the new car market starts to dwindle.

That thesis hasn't worked out yet, simply because the total market is still so broad that loss of one segment hasn't been too noticeable.



SEN. DOUGLAS held hearings, recommended stronger FRB. . . REP. PATMAN didn't like his findings. He's preparing for . . .

Another Probe of the Federal Reserve

Patman's committee hearings aren't going to result in changing the monetary system. But they'll bring out his gripes.

For the second time in two years, a congressional subcommittee is going to give the nation's monetary controls a thorough airing.

Only the preliminary spadework has been done so far; public hearings won't start until January. But already you can guess at the tone they are likely to take: They'll be critical of the Federal Reserve System—and largely out of harmony with the conclusions reached by Sen. Douglas' group 22 months ago.

• **New Quarterback**—The flip-flop won't result from any basic changes in the monetary system or in the problems it faces. Rather, it will stem from the fact that a new personality will be calling the signals. The chairman of the five-man investigating committee—a subsidiary of the Joint Committee on the Economic Report—is Rep. Wright Patman of Texas, a long-time foe of the Federal Reserve. Patman's economist will be Henry C. Murphy, a former Treasury staff man.

Patman has the westerner's ingrained fear of tight money at high interest rates. He wants a perpetual easy money policy and, to guarantee it, direct control of the Fed by the President.

When Sen. Douglas' report urged FRB to regulate the money supply in the broader interests of the economy—

rather than in those of the Treasury alone—Patman vigorously dissented. And when the Fed stood up to the Treasury and won its agreement to a tighter money policy that raised rates, Patman decided to act.

• **Broad Scope**—The formal accord with which the Treasury and the Fed settled their differences last March is serving as the springboard for the current investigation. But the inquiry will go beyond the terms of the accord.

The subcommittee's staff has sent out 1,100 questionnaires to government officials, bankers, economists, insurance executives, and government bond dealers. They probe into general economic policy, inflation controls, and the role of the various agencies.

The forms were tailored to each class of recipient. Treasury Secretary Snyder got one specially drawn up for him, FRB chairman Martin got another, and the economists still a third. Some of the questions the recipients were asked:

• What do they consider their mandate from Congress to be, and how do they formulate policy? (Asked of government monetary agencies.)

• What would a good monetary policy be?

• What did they think of the March accord?

• Is the banking system adequate—especially as a source of capital for small business?

• **Response**—Most of the questionnaires have been returned, and the committee's staff is now busy reading and classifying the replies. The substance of the answers is being withheld for the time being, but it isn't hard to divine the gist of what various groups have said.

The Treasury has always held the view that rates should stay low and rigid. It is already paying almost \$6-billion a year in interest on the public debt and doesn't want to boost the total. Besides, higher rates on new securities drive down the price of old issues, make investors shy away.

The Federal Reserve insists it must be free to use credit control methods that raise rates in order to check inflation. Squeezing bank reserves by raising legal requirements or by open market sales of government bonds makes it harder to get loans and makes them cost more.

The Council of Economic Advisers has usually been a Treasury supporter, arguing that increased turnover in the money supply and the large liquid assets owned by the public make control of credit ineffectual. The council is doubtless restating this line, but now in more guarded terms.

The bankers are heavy backers of the Fed. They own it, control some of its

policies, and want to keep things this way. Besides, they claim that higher rates are needed to cover their own rising costs.

The economists express widely divergent views. But there is some bunting of sentiment in favor of a middle-of-the-road policy—limited freedom for the Fed.

• **Sound and Fury**—Despite the work involved in getting out the questionnaires and processing them, little in the way of legislative recommendations will result. As chairman, Patman can direct the course that testimony takes and bring out all the points he'd like to make. But three members of his subcommittee are staunch supporters of an independent Federal Reserve. Sen. Douglas, who headed the previous inquiry, egged FRB into standing up to the Treasury. Sen. Ralph Flanders is a former president of the Boston district bank. Rep. Jesse Walcott has long advocated tighter controls on credit.

Indeed, this triumvirate may very well come up with a report that strengthens the Fed still further. At the very least, the investigation should throw some light on current monetary problems and practices.

Any Bonus Is Legal—Up to \$40

It's bonus time again, with new rules this year.

Employers who have given bonuses in the past at Christmas or yearend have nothing to worry about, as long as they follow the same formulas as in the past. But it looked for a while as if employers who didn't give bonuses last year would be barred from giving them this year. Then the Wage Stabilization Board came up with a pat on the back for these employers.

Under WSB's new rule, employers who want to initiate bonuses this year can pay up to \$40 per employee, with no strings attached. WSB's rules apply to all hourly workers, all salaried employees covered by the federal 40-hour week law, all other salaried employees who are represented by a union.

At the same time, WSB's relaxation got a cold reception at the Salary Stabilization Board, which covers most white-collar workers and others not under WSB's wing. However, it looked as if SSB would come up with a counterart of WSB's \$40 bonus.

Even if SSB doesn't act formally, salaried employees can probably be paid a bonus comparable to that given hourly workers. Last week's Salary Stabilization Order No. 6 permits extension of the same pay benefits given to hourly workers by WSB rules.

Goods on Move

Inventories are going out of the warehouses. Biggest reason: stockpiled appliances moving to buyers.

For the first time in months commercial warehouses in many areas of the country have space available. Nobody in the warehouse business is particularly upset, because there's been plenty of new warehouse business around for years.

What the shift does point to is the fact that big inventories of appliances that were troubling retailers may be easing. And that's a general tipoff that the business situation is brighter.

• **Everything Is Moving**—A BUSINESS WEEK survey of warehouses around the country shows what's making the hole on warehouse floors: The surplus stocks that dealers have had to stash away for lack of sales are moving out. But outward-bound goods cover more than just appliances. All kinds of stuff—from airfoam mattresses to textiles—that have been piling up either because of lack of markets or because dealers were hedging against shortages are on the way out.

Some warehouses report that as much as 35% of their space is vacant; others say they're still jam-packed.

But even the warehouses that have space available now soon will be full again, because the government may soon be filling every loose foot in the country with defense materials.

• **Regionwise**—The kind of goods moving and the rate vary from area to area, but here's the situation in a number of parts of the U.S.:

Charlotte, N. C.—Volume stored is off 10% from peak early last spring. Cotton textiles are moving out, but raw cotton isn't moving in fast enough to fill the holes. Appliances are down, below normal inventory levels in a couple of warehouses. Other metal products are going out, too.

Cleveland—Machine tools that had been in storage are moving out fast as defense needs mount. Metal inventories of all kinds are dwindling, too. Biggest dip in stored goods stems from big quantities of appliances going out. About the only thing that isn't dropping appreciably is stashed autos.

St. Louis—One warehouseman said there has been "a sort of exodus of home appliances, which were the things that got us crowded." Appliance inventories are pretty much back to normal now. Another says he's running 80% to 90% full, but could probably handle a few more carloads. But still another operator, who handles

goods in transit for carload shippers, says he's so full he has had to turn down regular customers.

Boston—There's more storage space now than there has been for months. In October floor space was 70% to 80% filled. Now it's probably around 60%. Movements have occurred in appliances, but they've also covered everything else from raw wool to canned foods. Some warehouse operators figure materials shortages are accounting for the situation; others say sellers are running down their inventories and will build them up again this winter if they can get the merchandise.

Providence—One operator just opened up a second warehouse. Two weeks after he advertised space available, he was filled. A recent strike at Brown & Sharpe Mfg. Co. forced this machine tool builder to rent warehouse space to hold incoming stocks of metals and parts until it got back into operation, so that glutted the city's warehouses even more. And a refrigerator maker has socked away 8,000 refrigerators in Providence as part of a program he has in the works to spot 100,000 of them around the country.

• **Situation Good**—There are plenty of seasonal movements—especially of farm products—but in general the big exodus seems to be in hard goods. In any case, nobody is losing sleep—the warehouse has been a bonanza for 11 years, and everybody figures it will continue for a while, especially with the help of government storing.

Roger Putnam Succeeds Johnston as ESA Head

Truman's appointment of Roger L. Putnam this week as administrator of the Economic Stabilization Agency left politicians and businessmen gasping: "Who's he?" Few people knew anything about the man who settles down Saturday in Eric Johnston's old office.

Putnam is a businessman. He's president of the Package Machinery Co. in East Longmeadow, near Springfield, Mass. (about 800 employees). He's also a director of several corporations, including American Bosch Corp. and Perkins Machine & Gear Co.

Putnam is a Democrat. He was three times mayor of Springfield (1937-1943) and ran for governor against Leverett Saltonstall in 1942.

Besides the combination of businessman and Democrat, Putnam offers a record of good relations with labor—though his company did have an 11-week strike over wages and fringe benefits last year. Said one Springfield union officer: "Hell, they could have picked a lot worse guys than that."



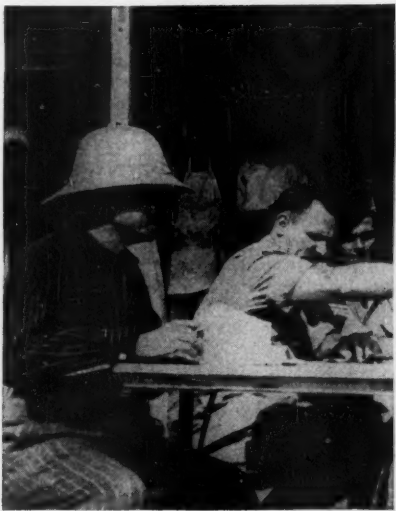
WATCH British troops keep a strict watch on all roads leading into the canal zone, frisk passing Egyptians for concealed weapons.



WAIT Egyptians, waiting their turn to be cleared, sit around inside



PATROL British troops, aided by Egyptian policeman, comb the roof-tops for arms. This search has been going on since October.



PAYDAY Native laborer gets paid. He's one of the few

Britain Cracks Down on the Suez Canal

To protect the Suez Canal in 1882 the British bombarded Alexandria, landed troops at Ismailia, fought the battle of Tell-el-Kebir. That battle led to a virtual British protectorate over Egypt until World War I.

Today, 69 years later, the British are using force again to hold the Suez—which is important to the West now for its air bases as well as for its strategic waterway. So far, though,

there have been no bombardments and no pitched battles: The British have landed troops, but only to reinforce the garrison that was already there under the Anglo-Egyptian treaty of 1936 (BW—Oct. 27 '51, p. 173).

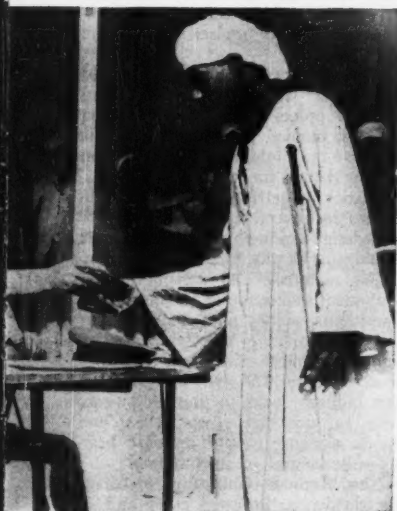
• **No Fireworks**—When the Egyptians denounced the 1936 treaty two months ago, there was talk of a British occupation of Cairo. But fireworks like that look less likely today, probably won't

come unless the Moslem Brotherhood sets the mobs loose in Cairo. What seems to be ahead for the British forces is a dreary occupation routine, punctured by sporadic skirmishes with zealous Egyptian nationalists.

Security measures have to be strict in the Canal Zone. The search for arms started back in October, still goes on. British families have been moved out of spots like Ismailia, where



barbed wire compound and jeer at British sentry.



Egyptians still working for the British; 40,000 of his fellows quit.

British troops and Egyptian police tangled last week. Biggest British headache: finding labor to replace the 40,000 or so Egyptians (95% of the zone's work force) who have pulled out. Workers are being brought in from Cyprus and other British-controlled ports in the Mediterranean.

The higher Egyptian authorities in Ismailia, who are as alarmed as the British over the recent outbursts of street fighting, have also taken preventive measures. All ranks in the Ismailia police below that of officer have been disarmed.

TV Revenues Rose From \$28-Million to \$100-Million . . .

But Take From Radio Went Like This:

(Network revenues for the 10 months through October)

	1951	1950
American Broadcasting Co. . . .	\$27,209,667	\$29,431,370
Columbia Broadcasting System	58,247,614	57,744,701
Mutual Broadcasting System . .	15,348,653	13,422,055
National Broadcasting Co. . . .	45,662,244	51,293,402
Total	\$146,468,178	\$151,891,528

Source: Publishers' Information Bureau

Why NBC Guarantees Listening

A lot of the actions of radio networks these days can be explained by the figures above. Networks are scared. They're grabbing for life preservers.

National Broadcasting Co. grabbed at one last week under the heading of Guaranteed Advertising Attention Plan. The offer was this:

NBC wants three advertisers jointly to sponsor three weekly shows. Researcher A. C. Nielsen will audit the series via his regular Audimeter (tape-recorder) check of home radios. NBC guarantees that the sponsors' one-minute plugs on the three shows "will be heard in American homes 5,300,000 times each week" at a cost of \$2.75 a thousand. If there are any listeners over that number, that will be a bonus for the advertiser. If it's under that, NBC will refund the sponsor on a pro rata basis.

• **Time and Talent**—The three shows chosen for the experiment are "\$64 Question," "Nightbeat," and "Hollywood Love Story." While NBC wants three sponsors, it will get the package going if it wraps up two to start with. Cost per sponsor: \$14,600 per week, including time and talent.

From this and other indications it's obvious networks are willing to go pretty far to bring in more business.

Earlier this year, led by Columbia Broadcasting System, the radio chains tried rate-cutting (BW—Apr. 28 '51, p. 84). The results weren't too bad for CBS. But it didn't help radio network revenues as a whole. They proceeded to slip 3.6% for the first 10 months of this year on top of a 2.3% dip in 1950.

But even if radio network as a whole had managed to keep even in revenues, that still wouldn't be enough to allay the fears. For not only are revenues coming down but costs are going up. This squeeze has everyone worried.

• **Worse Ahead**—Moreover, a lot of network people feel that the worst is

yet to come. Within the past week or so, two major advertisers have canceled shows—a Carnation Co. show over CBS and a General Foods' show for Maxwell House over NBC. That's about \$2.5-million in time right there. The money saved by these advertisers will go into TV.

Thus TV fattens while radio is beginning to feel hunger pangs. The figures are phenomenal, even for television. Last year American Broadcasting Co. had TV network revenues of \$4-million for the 10 months through October; this year it piled up \$14.6-million in the same period. The CBS figures are \$8.4-million and \$33.1-million; NBC, \$14.8-million and \$46.1-million.

Even confronted with this common enemy, radio network people immediately started feuding after announcement of the "attention" guarantee.

• **Rebuttal**—CBS took full-page ads this week to refute the NBC position, though not naming NBC in its ad. CBS, said the copy, "delivers advertising at the lowest cost-per-thousand-homes in all network radio—lowest by 18%." Its figures for CBS' cost-per-thousand was \$2.74, as against a range of \$3.33 and \$3.93 for the other chains.

Verbally, the CBS research department had some explicit gripes about the NBC claims. "What NBC is guaranteeing," they stated, "is a rating of 4.8. We at CBS can deliver, at the \$14,600 asked by NBC, a show like 'Mr. Chameleon,' which has a 9.0 rating."

NBC retaliated with the point that the unique feature of its offer is "attention" for commercials, not merely the number of listeners to the program.

There were other gripes against NBC. Advertising agency executives pointed out that (1) the plan puts emphasis solely on numbers and bypasses other qualitative factors, and (2) it opens the way for other advertisers to demand the same kind of guarantee.

How Are Substitute Materials Doing?

● Not too badly, say some industry men. Need for conservation actually is cleaning out some wasteful practices.

● There's downgrading—substitution of less critical materials for scarcer ones—but no flood of ersatz stuff yet.

● It boils down to a time for review of materials use, of design, of production methods. That doesn't really hurt.

When you have just so much cloth, you cut your pattern to fit the cloth—or else eke out the cloth with some other material. The same is true with steel, or copper, or tin. That's the lesson industry is learning all over again, after a few years of postwar plenty. It isn't so painful as it looked at first.

To get around today's problems of materials supply, industry is:

- Substituting less critical materials for scarcer ones.

- Sharpening up designs to use materials more economically.

- Switching to production methods that waste less material.

The result is a long way from the ersatz products of World War II. So far at least, there haven't been any wooden baby carriages or plastic paring knives. Most of the changes brought about by materials conservation aren't noticeable to the consumer. Many of them stand a good chance of surviving on their own merit after the shortage period.

- **Spur to Engineers**—In some ways the materials crisis has been a boon to industry. It has goaded engineers to a healthy reappraisal of design and methods—just as a depression would have done if it had come along first. The result in some cases: lower costs, production shortcuts, useful alternate methods.

Substitute parts generally look and perform about the same, despite the critical materials that have been squeezed out of them. The crisis, for most manufacturers, stirs ingenuity, doesn't drive to desperation. Manufacturers can usually afford to measure a substitution by two standards:

- Does it impair quality or serviceability of the product?

- Is the substitute material more readily available—and will it continue to be so?

- **Boron Steel**—Alloy steels, especially those containing nickel and molybdenum, are beyond the reach of some manufacturers. Boron steels are being tapped as stand-ins. They had a whirl in World War II, but were dropped afterward by most users. They were

hard to heat-treat, and they cost almost as much as alloy steels.

Today a host of blue-chip companies have swung over again to boron steels—Pratt & Whitney, J. I. Case, International Harvester, Mack Truck, and others. They're learning more about the heat-treating problem every day. Example: The hole of a boron steel gear tends to shrink during heat-treatment, but the shrinkage can be anticipated in the original design by specifying a slightly larger hole before treatment.

Talk in the steel industry leads you to believe that many users will stick with boron steel this time, even when there's again a free choice. Fabricators will have learned to live with it by then, and costs have been brought well below alloy steels.

Another example of downgrading by substituting less critical metals is the move from alloy steels to ordinary carbon steels.

- **Good or Bad?**—Some industry men claim this trend is long overdue. They say fabricators have been lazy, depending on alloys to get the properties they want; heat-treating has become something of a lost art. Yet, many times, the proper treatment of carbon steels will deliver the same qualities that alloying elements give.

Something like that will have to be done as jet engines gulp up larger quantities of the scarcest alloys, such as nickel, cobalt, and columbium. Ceramic coatings for plane engine parts (BW—Oct. 6 '51, p. 46) may help ease this demand for materials that resist heat and corrosion.

In certain industrial equipment, refractory materials such as silicon carbide are doing even a better job than alloy steels. Retorts lined with silicon carbide have stood up for as much as 18 months; heat-resisting alloy steels burned out in two or three months. Silicon carbides have replaced metal in moving parts such as rollers in steel mills and impellers handling abrasive materials. They last longer.

- **Official Blessing**—As an incentive to switch from copper and aluminum to

carbon steels, National Production Authority has set aside supplemental allotments of carbon steel for first-quarter 1952. Defense Production Administration is preparing a downgrading chart recommending substitute metals for a variety of uses. It deals principally with copper, aluminum, zinc, and tin.

In these nonferrous metals the scramble for substitutions is getting more and more involved. Copper users are latching onto aluminum; aluminum users are eying ferrous substitutes. By and large, though, the main current is away from copper and toward aluminum. In late 1952 or early 1953, aluminum production will be greatly expanded; copper's future is grim.

Most auto and truck makers have been experimenting with aluminum radiators to save copper (BW—Oct. 13 '51, p. 52), and even steel is getting a look. Westinghouse and General Electric are known to be using some aluminum windings to replace copper wire in motors.

Other replacements for copper and its alloys: steel and plastic-lined chemical processing equipment, nylon bearings, molded plastics and zinc die castings for hardware, powdered iron rotating bands for artillery shells.

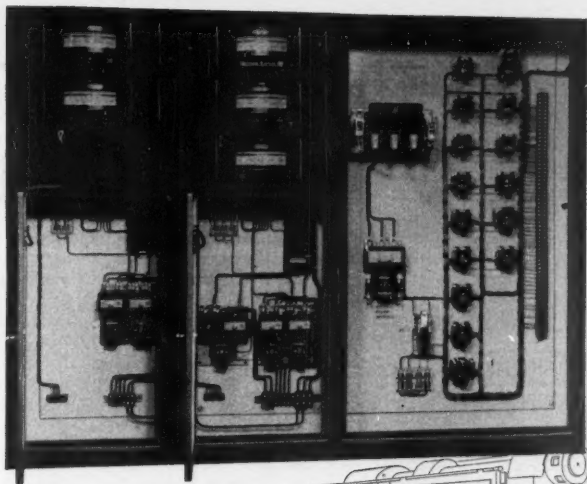
Plastics are getting a big play as substitutes for several metals.

- **Redesign**—Industry is hard at work refining designs as another way of conserving materials. One air-conditioning equipment maker found he could make aluminum cooling fins much thinner without sacrificing performance. DuMont was able to cut in half the gauge of steel used in TV sets. The construction industry looks to prestressed concrete to save steel (page 105), and there's a swing toward masonry bearing-walls instead of steel frames.

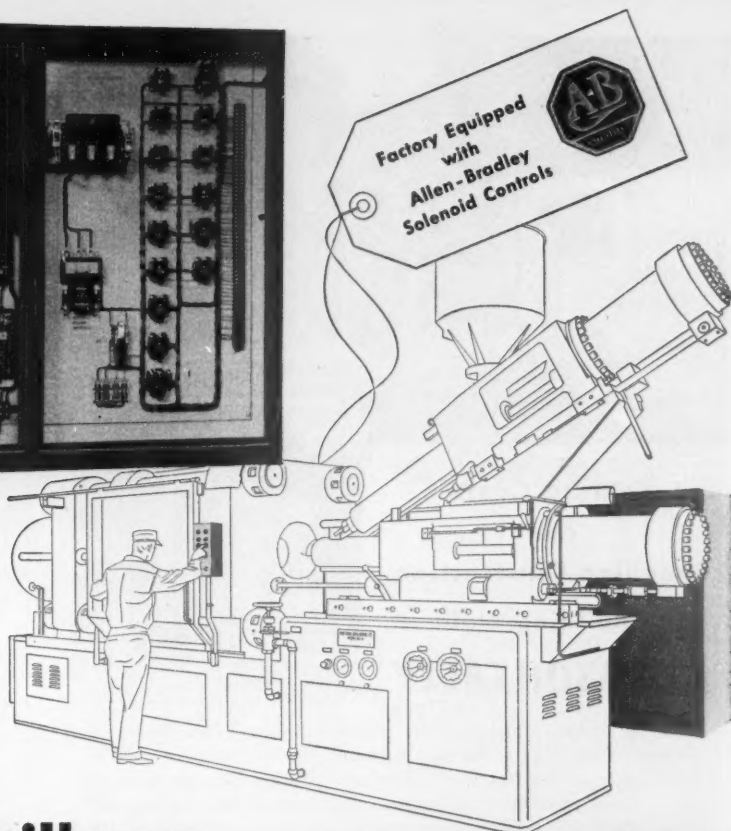
- **New Methods**—Companies are drawing dividends, both in costs and in materials conservation, also by revising production techniques.

For example, some GE appliances have to use nickel plate. Much of the plate was formerly lost in buffing. Now the thickness of plate has been cut in half, but the material under the plating is finished smooth; hardly any buffing is needed after the plating.

Because machining is necessarily wasteful of metal (so much of the stock is reduced to shavings), casting methods are finding favor, such as the shell molding process. That's also why powdered metal is rising in popularity. Besides, powders of copper alloys, iron, zinc, even stainless steel are easier to come by than the same metals in sheet, strip, rod, or wire.



Close-up of a typical Watson-Stillman Injection Molding Machine control panel equipped with Allen-Bradley controls.



Watson-Stillman INJECTION MOLDING MACHINE

operated by Allen-Bradley Control Panel

This huge Watson-Stillman Injection Molding Machine, capable of molding plastics products approximating 200 ounces in weight, permits such products as television and radio cabinets to be molded in one operation. The control panel for this machine is equipped with Allen-Bradley solenoid starters, contactors, and timers.

All Allen-Bradley solenoid contactors and starters have but one moving part. There are no links, levers, pins, pivots, or bearings to corrode, stick, or break. Their simplicity guarantees trouble free performance. Double break, silver alloy contacts are maintenance free.

Allen-Bradley motor controls are the preference of machine tool manufacturers because they are so reliable and trouble free.

Allen-Bradley Co., 1332 S. Second St., Milwaukee 4, Wis.



Bulletin 849
Pneumatic Timer



Bulletin 709
Solenoid Starter



Bulletin 800T Oiltight Push Button
and Selector Switch.



ALLEN-BRADLEY

SOLENOID MOTOR CONTROL

QUALITY



Cutting Costs and Speeding Construction by Building Walls **HORIZONTALLY**



"Tilt-up" is one of many concrete construction procedures Portland Cement Association engineers helped develop. As the name implies, wall panels are cast flat, then hoisted into position. By making maximum use of mechanical equipment, tilt-up saves time, money and materials. Such savings are especially important for building the warehouses, factories, barracks, hangars and other structures urgently needed in the national defense program.

Findings like this resulting from PCA research and development are immediately made available free to architects, engineers and contractors through the Association's field engineering service and its educational and promotional work. For more than one-third of a century this activity, voluntarily financed by the Association's 67 member companies, has represented an important contribution to the building of America. Today, for example, as a result of this work:

Owners, investors and taxpayers get **low-annual-cost** construction, rugged strength, maximum firesafety and enduring beauty in concrete factories, hospitals, schools, stores, public buildings.

Home owners get charming, firesafe concrete houses that offer unexcelled comfort the year around, have longer life, require fewer repairs and maintenance and cost less **per year** to live in.

Farmers, striving to increase food supplies, get maximum yields at minimum cost with concrete improvements that save feed and labor and protect livestock health.

Motorists enjoy safe, smooth-riding concrete roads and streets that serve for many years at lower **annual** cost than other pavements.

PORTLAND CEMENT ASSOCIATION 33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

BUSINESS BRIEFS

The new record high in the BLS consumer price index (page 10) automatically boosts wages of 14-million workers by 1¢ an hour. Last week's General Salary Order No. 6 by the Salary Stabilization Board also makes 5-million white-collar workers eligible for similar cost-of-living increases.

West Virginia's vet bonus bonds go on sale this Saturday, despite a thumbs-down by the Eastern Voluntary Credit Restraint Committee (BW-Oct.20'51, p144). The state is trying to sell \$37.5-million in bonds to banks and individuals; state funds stand ready to absorb any unsold portion.

Sheraton Corp. bought the Book-Cadillac Hotel in Detroit for \$5.8-million, plans to spend another \$1-million over the next two years in remodeling. One hundred rooms will be added to the 1,100-room hotel. That will bring the hotel chain's total to 15,000 rooms, claimed to be the largest in the U.S.

July's superflood in Kansas City knocked the Cudahy Packing Co. plant permanently out of business. The 52 buildings were all badly damaged; loss was calculated as high as \$4-million. Now the property has been sold to a syndicate of six Kansas City businessmen, who have already got lease commitments for more than half the 1-million sq. ft. None of the new tenants will be packing companies.

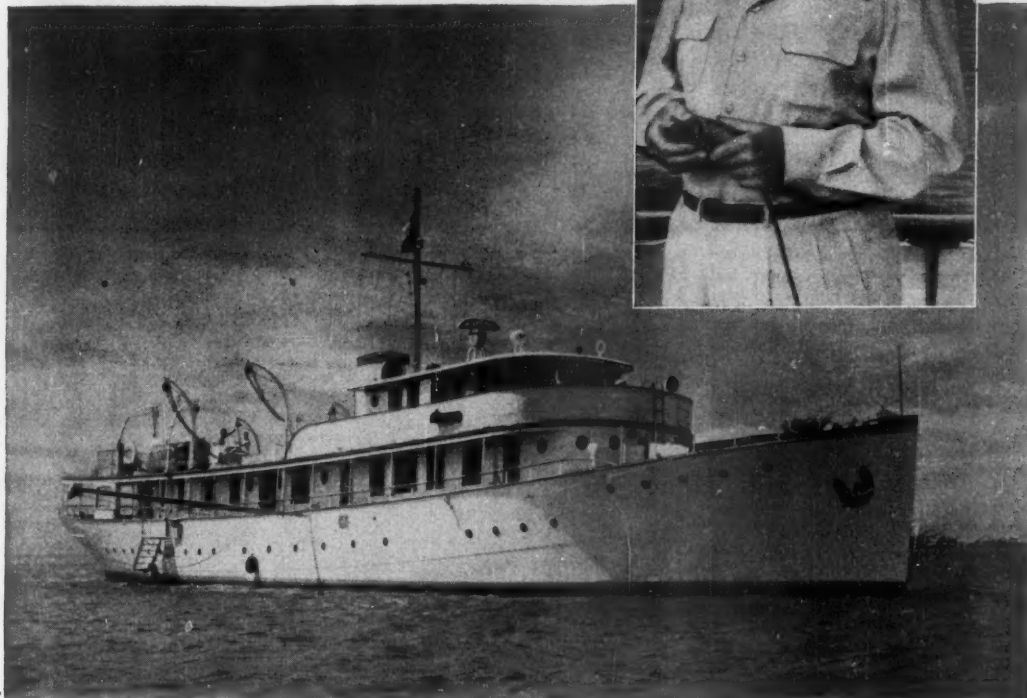
Truck prices were raised by three manufacturers under an OPS permit to pass along the extra cost of processing conversion (unfinished) steel. Ford went up nearly 1%, Dodge averaged 1.14%, Chevrolet averaged 1.8% increase.

Office machine sales for first-half 1951 ran 25% to 50% ahead of 1950, depending on the company. Materials are beginning to pinch, though.

Seven public utility districts in Washington are about ready to sell \$115-million in bonds to buy property of the Puget Sound Power & Light Co. Each county district would acquire distribution systems within its borders, and all would share in buying the generating plants and transmission lines.

Standard Oil Co. (Ohio) will use low-cost chromia-alumina as a catalyst for the first time in an \$8.5-million catalytic reforming unit at Lima, Ohio. Ohio expects the new compound to boost gasoline output by 3,000 bbl. a day.

6,000 Carefree Miles



D. P. Hamilton steers his yacht, PUDLU, with the remote controller.

...with SPERRY MAGNETIC COMPASS PILOT

From D. P. Hamilton, of Shreveport, Louisiana, comes new evidence that the Sperry Magnetic Compass Pilot's complete automatic control of the steering wheel means more relaxation, less work and worry for the yachtsman.

► After a 6,000 nautical-mile trip on his yacht, PUDLU, with Sperry automatic steering, Mr. Hamilton said:

► "We encountered varying types of weather from calm to exceedingly rough—in some cases substantially high seas. The Sperry Magnetic Compass Pilot was in operation practically the entire time of our trip—night and day—and I am very happy to report that it

performed its service perfectly and was satisfactory in every way."

► On subsequent trips, the equipment "has continued to operate perfectly—without need of repairs—and has not given one minute's trouble or worry. I can heartily recommend the Sperry equipment to any yacht owner or for installation in any vessel."

► On pleasure craft, fishing vessels or work boats, the Sperry Magnetic Compass Pilot holds the prescribed course as long as desired even in a rough following sea—eases strain of manual steering—and with the portable Remote Controller makes full rudder control available outside the wheelhouse. The Sperry Magnetic Compass Pilot is backed by Sperry world-wide service.

SPERRY

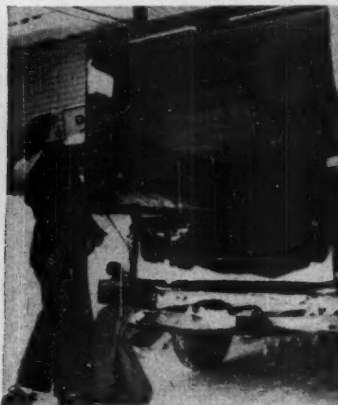
GYROSCOPE COMPANY
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GREAT NECK, NEW YORK • CLEVELAND • NEW ORLEANS • BROOKLYN • LOS ANGELES • SAN FRANCISCO • SEATTLE
IN CANADA — SPERRY GYROSCOPE COMPANY OF CANADA, LTD., INTERNATIONAL AVIATION BUILDING, MONTREAL

LABOR



ASSET College training makes better workers. College women had more staying power in World War I jobs.



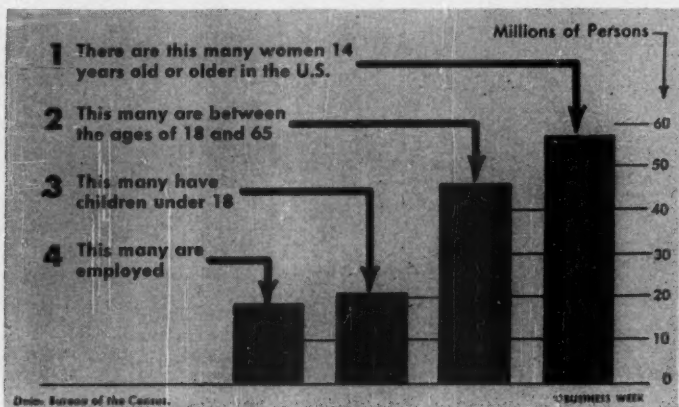
DEBIT Physical labor jobs put women at a disadvantage. They can't match men in this area.



ASSET? Studies have yet to relate home experience in marketing, etc., to civilian jobs.



LURE? Would career opportunities lure women into the factory?



AN ACCURATE MEASURE of womanpower available in the U.S. is needed before the Defense Dept. can make any plans. One way to get it: a national registration of women.

What About the U.S.' Womanpower?

Sober forecasts of manpower shortages in 1952 have Pentagon officials asking these questions: How big is the nation's womanpower potential? What inducements will lure women out of the kitchen and into the factory?

The Pentagon wants the answers now, so it can work out plans for women in industry before they are actually needed.

Solving the womanpower riddle, though, is going to be a tough thing to do. The experts have little or no facts to go on now. During the last war, appeals to get women into the factories were mostly hit or miss attempts. Unlike in Britain, no careful survey was

ever made here to find out how many women were actually willing to work. That's why there's a crying need for intensive research now.

• **Start From Scratch**—The only thing the experts have to go on so far is the belief that during World War II womanpower was not used to its full advantage. The fact is that with minor exceptions only the simplest and least responsible tasks were handed out to women war workers.

But the minor exceptions proved that many more women could be utilized in responsible, even highly technical, positions.

One way to get woman's place in in-

dustry and in the services is through university studies, thinks Dr. Esther Strong, consultant on womanpower to Assistant Defense Secretary Anna Rosenberg. She is pushing for the first of these to start by next spring.

• **Questions and Answers**—Specifically, here are some of the questions the Defense Dept. wants answered:

• What effect does education have on women's working capabilities? In an army study made by Dr. Anna Baetjer of women in industry during World War II college-trained women showed up their noncollege sisters. The college women were better workers and had more staying power on

Sturgis Steel Chairs Survive Kansas City Flood!

This is one of several Sturgis steel chairs salvaged from the offices of the Colgate-Palmolive-Peet Company after last summer's disastrous Kansas City flood. For over a week these chairs had lain submerged in a corrosive mass of mud, acids, oils and the pollution from 10,000 rotting cattle.



This is the way a Sturgis No. 1225 Office Guest chair looked after being pulled from flood filth.

To the surprise of Colgate-Palmolive-Peet executives, when the filth was scraped and washed off, *the steel parts of the chairs showed absolutely no rusting or finish peeling.* As soon as the upholstery was replaced the chairs were as good as new.

Sturgis engineers were *not* surprised, however. They had long ago included Bonderizing of all metal parts in their program of building chairs capable of performing above and beyond normal use demands. That these Sturgis chairs survived a flood is proof not only of the value of Bonderizing but of the soundness of Sturgis manufacturing methods.

You can't see all the quality that's engineered into Sturgis chairs but it's there in full measure—and because it's there, a Sturgis chair is a long term investment in office comfort and efficiency.



Sturgis Dealer Wm. J. Evans (left) shows W. B. Ege of Colgate-Palmolive-Peet Company the same chair after it had been washed and reupholstered. The Bonderized steel frame came through unscathed.

You can't see all the quality that's engineered into Sturgis chairs.



Grooms hair so Handsomely yet hair looks so 'Natural'



**Never
Plastered
Down
No Obvious
Odor**

Kreml is the hair tonic preferred among top business and professional men because it grooms hair perfectly yet never leaves hair obviously plastered down with greasy dressings. Nothing can compare with

Kreml for distinguished, natural-looking hair grooming!



KREML *Hair Tonic*

**PREFERRED AMONG
MEN AT THE TOP**

the job. One reason, says Dr. Baetjer, is that college women ate better and rested more during their formative years. What's more, the study showed that college women took better care of themselves after working hours; that is, they got more rest and a better diet. The Defense Dept. wants to expand this study to find out what other effects education has in terms of working ability.

- How important is the sex differential? Various experts disagree on whether there is a sex differential at all in terms of productive capacity. Some argue that women can turn out as much work as men in most jobs. But, again, army reports show that women truck drivers were invalidated home far more frequently than men. Thus, there had to be more women drivers than men to take up the slack. A survey along these lines now would show how many more women would be needed than men to maintain a certain level of production of defense jobs.

- Are career opportunities an inducement? Defense officials believe

that government and industry are losing by not providing a career ladder for women equal to that for men. They feel that many more women would stay on the job after they marry, if they had the same opportunity as men to go up the ladder. They intend to find out to what extent lack of opportunity induces women to quit.

- How does home experience tie in with civilian employment? So far, there has been no successful evaluation of a woman's experience gained at home. Studies along this line would relate home training in marketing, budgeting, administration, and the like, to civilian employment.

- **Show of Hands**—Besides the answers to these questions, the Defense Dept. would like to get an accurate measure of womanpower available in the United States. The best way to find this out, suggests Col. Marv A. Hallaren, head of the WAC, is to have a national registration of women. It would give not only an accurate count, but also a base on which to plan for total mobilization.

Unions Vow to Blow Lid Off Wages

Steel and oil workers announce they are going to smash WSB ceilings in upcoming bargaining.

The steelworkers and oilworkers are out to break—not bend—wage stabilization ceilings. That is their announced position. The steelworkers stated it vigorously this week as negotiations opened in Pittsburgh and New York. And AFL, CIO, and independent unions of oilworkers echoed it when they mapped joint strategy in St. Louis.

- **What Formula?**—Regional Director Joseph Molony of the United Steelworkers (CIO) served notice that USW is out to break Wage Stabilization Board regulations on raises. Speaking to officers of 105 Buffalo district locals, he said that Philip Murray has been hesitant about saying whether the union intends breaking WSB's wage formula.

"I'm not Phil Murray," he told them. "I want this to be our worst-kept secret: We are not going to pierce the formula; we are not going to bend it—we are going to break it. The 600,000 men in basic steel are going to get substantial wage increases, and I don't mean 4¢ an hour."

Under the WSB formula, steelworkers are entitled to 4¢ or 5¢-an-hour wage hikes. "This is something less than substantial in my book," Molony said. He added:

"It's got to the point where as soon as a working man asks for a raise, out rush a bunch of government experts with slide rules and cost-of-living tables and computing machines. They've got

to figure out whether the demand fits the government formula.

"Now, I always thought a formula was something you fed to babies. Evidently, WSB thinks it is doing business with babies. By the end of the month, it will find it is doing business with the hardest bunch of babies it ever saw. WSB isn't going to bottle-feed the United Steelworkers."

- **At Bethlehem**—Molony's statement is important because he is top negotiator for the union in Bethlehem Steel bargaining. First talks were set for this Friday in New York.

Murray will personally direct union negotiations with U.S. Steel. Bargaining, which is expected to set the basic-steel pattern (BW-Nov.24'51,p34), got under way in New York.

- **Joint Action**—The oil industry drive to break WSB's formula was mapped by representatives of 17 unions representing 250,000 workers. The unions pledged mutual support for campaigns to "obtain wage increases in excess of any previously allowed by the Wage Stabilization Board."

The oil unions are asking 25¢ and 30¢ hourly pay hikes, plus additional "fringe" increases.

The mutual-aid pact links AFL and CIO oilworkers' unions, the oil panel of the independent Confederated Unions of America, and a group of other independents.

NOW PROVE IT!

Without risk, without loss... discover for yourself that Sylvania Fluorescent Tubes are First!

Accept this daring Sylvania offer
...the greatest in lighting history!

Try 24 Sylvania Fluorescent Tubes of any popular type. If they don't give more light and maintain color and brightness for a longer time than any other brand, send them back with the signed Certificate of Assurance and your money will be refunded!

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makes offer possible!**

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1. COIL COATINGS containing Zirconium extended the active life of the coils and was a major factor in enabling Sylvania to triple the rated life of fluorescent tubes.

2. FLUORESCENT POWDERS, newly improved and rigidly controlled as to thickness and uniformity on glass of each tube, mean better, more even light for a longer time.

For outstanding electrical work of any kind, call the Electrical Contractor who displays this emblem



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FLUORESCENT TUBES, FIXTURES, SIGN TUBING, WIRING DEVICES; LIGHT BULBS; RADIO TUBES; TELEVISION PICTURE TUBES; ELECTRONIC PRODUCTS; ELECTRONIC TEST EQUIPMENT; PHOTOLAMPS; TELEVISION SETS

A dream for MAINTENANCE SUPERINTENDENTS

who want to sleep
sounder . . .



Dravo Counterflo Heaters, built for heating large open spaces in industrial and commercial buildings, cut maintenance time and costs to the vanishing point! Here's how . . .

Dravo direct-fired Heaters:

1. have automatic controls—on-off or modulating . . . require minimum attention . . . practically take care of themselves.
2. have long life and low maintenance—stainless steel combustion chamber eliminates refractory lining . . . heaters are of rugged construction . . . minimum efficiency of 80%.
3. require no duct-work—air throw of 150 feet sends heat to working level.
4. are easily installed—require only fuel, electric and exhaust connections . . . burn gas or oil . . . readily converted.
5. tested and approved—AGA and UL seals . . . each unit flame tested before shipment.



ONE MAINTENANCE MAN HAS THIS TO SAY:

"Our Dravo Heater is used for temporary heating on construction jobs. We move it from one location to another as required. During the last three winters it has run constantly 24 hours a day with practically no maintenance or repairs needed."



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Write today for a complete report on how your company can benefit by using Dravo Counterflo Heaters. Ask for Bulletin No. ON-523.

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Sales Representatives in Principal Cities

THE LABOR ANGLE

Union Goals: I

FOR MORE than 50 years the group of unions that makes up the main stream of the American labor movement has got along without a philosophy. Since the turn of the century, efforts of Socialists, Communists, radicals, and various other types of ideologues to capture the labor movement for their own brands of philosophy have been defeated. There have, to be sure, been individual unions established or captured by the radicals. But without significant exception they have either worn off their ideological differences or remain as isolated pools, separate from the main stream of organized labor.

To many serious thinkers it has seemed incredible that an institution so powerful, so vigorous, and so articulate as the American labor movement should be without doctrinal goals. They have looked for doctrine in the speeches, documents, and history of the unions. Failing to find it, some of the less responsible of the serious thinkers have imputed one doctrine or another to the labor movement. In this effort they are one with some employers who, involved in a fight with a union, think they detect in the union's activities some grand strategic design aimed at a radical goal.

THE STRANGE FACT is that organized labor in America has been completely pragmatic. It has rejected the ideologies that stem from Karl Marx and European sources and has devised no ideology of its own. It is probably the only institution in the world of comparable age, size, strength, and virility that has its goal summarized by one word, and that word an adjective. The word is, of course, "more." Sam Gompers, founder of the AFL, offered it many years ago in defining the aspirations of U.S. unionism, and it has never been improved on as a description of what the unions want.

THE FAILURE of American unionism to adopt some noun goal—as for example, socialism, justice, or even Utopia—has not come

about because of any lack of individuals determined to foist such philosophies on the unions. In recent times, such an undertaking came closest to success when cadres of Communists yeasted the ferment stirred by John L. Lewis in organizing the CIO. For a while it looked as though the CIO might carry all before it; and for a while it looked as though the Communists were entrenched deeply enough to win the new and successful union movement to their philosophy.

But the CIO stabilized at a point far short of total union encompassment in America, and even in that limited sphere the Communists were driven either out or underground.

ASIDE FROM the fact that labor in America isn't easily mobilized for doctrinal goals, the important reason why it has never adopted one is that efforts to impose one on it have almost invariably come from "outside." If Lewis had been a Communist, the CIO would surely be a different thing today. If Norman Thomas had William Green's job, the AFL would certainly have a Socialist ideology. Lacking the authority that comes with the highest union posts, the ideologues have been outsiders to the unions.

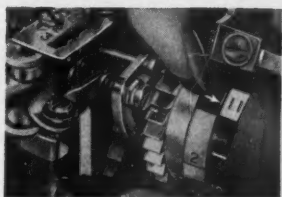
Actually, if Lewis had been a Communist, he could not have headed a mass movement in America; his philosophy would have found no acceptance among workers. Nor could a Norman Thomas be president of the AFL unless the AFL had already turned Socialist. The leaders of labor, to stay leaders, must never let too great a gap develop between their thinking and the thinking of their followers.

ALL THE MORE SIGNIFICANT, therefore, is the advocacy by Philip Murray, president of the steelworkers union and of the CIO, of a recognizable ideology. Rejecting communism and socialism, but wanting something more concrete and blueprintable than "more," Murray may be opening a new road for American labor. Murray is after Mitbestimmung. Why—and what it is—will be next week's Labor Angle.

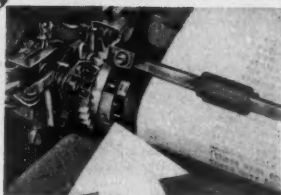
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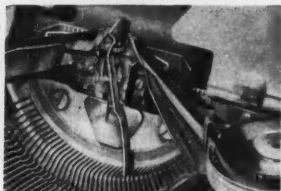
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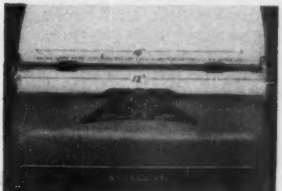
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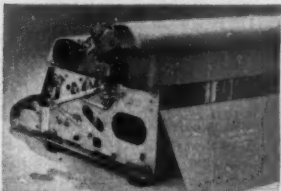
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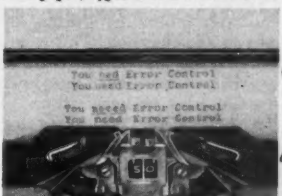
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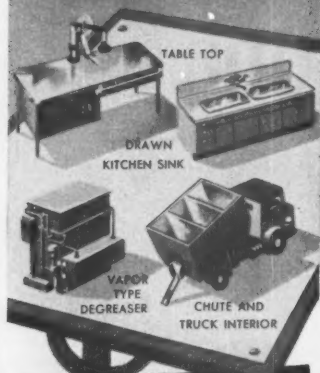


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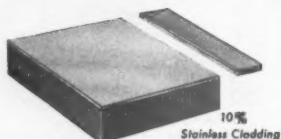
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Plant Transfers Irk Unions

Relocations, especially widespread in the auto industry, are cutting workers out of their jobs, says UAW. The union is taking Ford into court, putting pressure on others.

Rumblings against transfers of manufacturing operations to new plants—heard in the United Auto Workers (CIO) for some time—have been translated into definite action.

At Detroit, the giant Ford Local 600 of UAW has gone into federal court with a double-barrelled action to (1) restrain Ford from moving more of its production activity out of town and (2) collect damages from the company for moving already done.

The grounds of the action is a charge of fraud. Local 600 claims that it had assurances that Ford would not shift operations. Subsequent transfers, therefore, are claimed by the local union as unwarranted action and a violation of contract.

National Labor Relations Board records show numerous unfair-labor-practice actions brought by unions against employers who moved plants. In each, the union claimed the company had moved to get rid of a union or to avoid bargaining with one.

The Ford case is different. The local union doesn't claim that the company is running away from UAW, and no unfair-labor-practice complaint is involved. Instead, the UAW local simply asserts that Ford has no right to leave workers jobless by shifting operations to another location. This is an issue for a court of law rather than NLRB.

There are signs the international union isn't entirely satisfied with the soundness of Local 600's legal arguments. The international's lawyers have been studying the local's brief, but so far haven't intervened—as they normally would—in the court action.

At auto union headquarters, a brooding silence covers the entire question. It seems evident that a dominant factor in this attitude is international union suspicion of local union objectives. Walter Reuther and Carl Stellato, president of Local 600, have been at war for many months (BW—Sep. 8 '51, p. 30). Stellato has been making factional capital of the Ford transfers most of that time, trying by his militancy to rally support among his faction-torn constituents.

• **Payrolls Cut**—Within the past fortnight, Ford Facts, the local's paper, claimed that about 20,000 workers had lost their jobs at the Rouge plant because of transfers. Ford retorted soon after, noting that although payrolls are down from 70,000 to 50,000 since September, 1950, most of the reduc-

tion came about by quits and the like.

The facts being what they are, many international opponents of Stellato look on Local 600's suit as another weapon in the internal fighting. But those same opponents agree privately with Stellato in worry over transfers.

• **Hardest Hit**—The transfer problem is more serious in automobiles than in other industries. Auto plants follow population centers and keep close to markets. So when a sizable share of the national market opens up, say, in California, new plants spring up there. General Motors has already announced a new plant in Arlington, Tex.

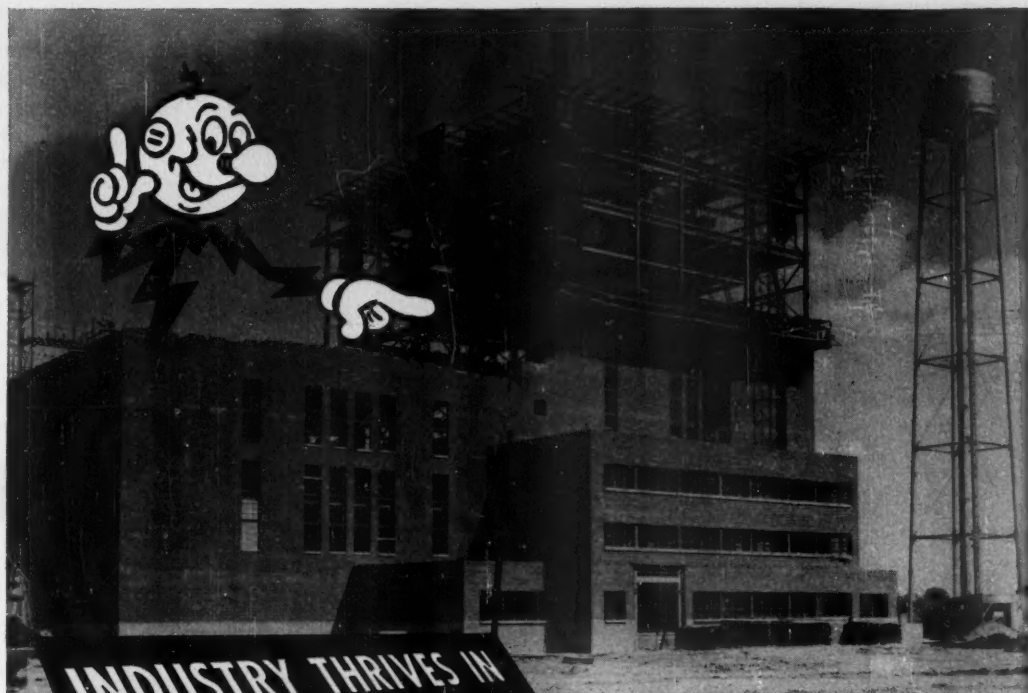
In expanding times such plants are additions, not replacements. What bothers the unions is that ultimately they may result in diminished operations at earlier sites. This is of greater concern to local unions than internationals.

• **Not Alone**—Although the Ford-Rouge problem has the center stage, there are parallel problem spots from UAW's standpoint. One is in Ford of Canada, almost across the Detroit River from the Rouge.

When Canadian Ford announced a few weeks ago that it would build a new assembly plant near Toronto, its headquarters city of Windsor shook almost visibly (BW—Nov. 10 '51, p. 162). The Ford plant in Windsor is by far the largest employer in the city. The UAW local union there indicated its worry, but did not react so violently as its U. S. counterpart.

• **Testing Ground**—Elsewhere in Detroit the transfer problem erupted this summer into a strike that is still continuing—a tieup that developed such intensity that laborwise observers felt the international was using it as a testing ground for the whole problem of plant transfers. This strike broke out at the plant of the Carboly department of General Electric, not long after plans were put in motion to build a new factory at Edmore, Mich., about 130 miles from Detroit. The local union, affiliated with UAW, staged its first strike in Carboly history when it heard that more than 100 jobs would be eliminated at least temporarily by the shift.

As the strike wore on, the company estimates of the number affected dwindled, due in part to introduction of new carbide products that will be made in the Detroit plant (BW—Nov. 3 '51, p. 42). But the deadlock did not immediately break—even after the com-



The new Justin R. Whiting power plant on Lake Erie, at the southeastern boundary of Outstate Michigan, will go into service in 1952.

THE ELECTRIC INDUSTRY PROVES IT!

SINCE VJ Day Consumers Power Company, which serves fast-growing Outstate Michigan, has increased its electric generating capacity 410,000 kilowatts, or 64%. Another 411,000 kilowatts are scheduled to be added before the end of 1954, bringing total generating capacity close to 1,500,000 kilowatts.

Why this tremendous expansion?

Industry thrives in Outstate Michigan and population has grown rapidly. Thriving industry and a growing population mean a greater demand for electric power.

The automobile industry, the furniture industry, the packaged food industry, the chemical industry, the paper in-

dustry, the fabricated metals industry and countless others thrive in Outstate Michigan.

Farming thrives in Outstate Michigan too, and this is one of America's most popular vacationlands, but the big reason for the growth of the electric industry in Outstate Michigan lies in the steady growth and prosperity of the manufacturing industries.

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Black area on map shows territory served by Consumers Power Company



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SOLID
STEEL!**

Supermarket carrier with ExM basket by John Chatillon & Sons, New York. Photo courtesy H. C. Boback Co., Inc., Brooklyn, N. Y.

**IT'S
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METAL!**



WHEELING CORRUGATING COMPANY

WHEELING, WEST VIRGINIA

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Louisville	Minneapolis	New Orleans	New York	Philadelphia	Richmond	St. Louis

pany reportedly guaranteed all jobs would continue past the first of the year and that layoffs would be in very small numbers after that.

• **Protests Spread**—Although the volatile auto industry is headquarters for these transfer arguments, the problem is not confined to that sphere. The textile industry is in the throes of geographical transition, from north to south, and its movements have been accompanied by protests from the Textile Workers Union of America (CIO).

TWUA has lately focused its attentions on several companies that are moving operations. Textron, Inc., for one, has planned to close its cotton mill at Nashua, N. H., said the union, and build three new southern mills, at Williamstown, N. C., Elizabethton, Tenn., and Textron, S. C. It also plans a factory at Aberdeen, Miss., and another new Textron plant is supposed to go in Meridian, Miss.

• **Counter Measures**—Looking at these and other examples, the textile workers decided the best way to counter was through government materials allocations. John W. Edelman, union representative in Washington, filed formal protests with the National Production Authority, asking that materials for the new Textron plants be withheld. Edelman also attempted to line up other pressures on the company. He called the attention of northern congressmen and senators to the shifts, pointing out that they would result in fewer jobs in their constituencies.

WSB Takes Freeze Off Labor Incentive Plans

The Wage Stabilization Board last week eased the strict curbs it ordered last Jan. 26 on new incentive and piece-work plans. It decided that new plans and revisions of old ones can be processed and approved if they meet specified standards.

The decision means that WSB can begin to consider some 100 cases frozen until last week in the board's files.

• **New Rules**—Under the relaxed rules, plans can be approved if:

(1) They do not increase unit labor costs—or if it can be shown that an increased cost would not be unstabilizing.

(2) The individuals or groups covered can make at least 15% more under the incentive plan than on straight day or hourly rates.

(3) Workers are guaranteed that they won't make less than a specified minimum rate.

(4) The plan contains adequate provisions for correcting or maintaining the set standards or rates.

(5) Technical reporting requirements are complied with.



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Voice on the River

HERE on the Hudson River amid the tooting of tugs and the other sounds of a busy harbor, conversation is going on between an Erie tug captain and the dispatcher on shore miles away. That's the marvel of Erie's radio-telephone system!

With this modern communication system, the boat dispatcher can talk to Erie tugboat captains anywhere in the harbor or they can call him when the need arises. Pier-bound tugs can turn around and pick up a string of barges without going ashore for orders. Whatever the weather, in the busy operation of Erie's navy, freight moves faster and service is improved because of the radio-telephone.

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time performance of Erie freight and passenger trains. It is another indication of Erie's progressive railroading—the continuous effort to assure the best in safe, dependable transportation to serve our country's industrial and military needs!

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LABOR BRIEFS

A 30-hr. week at Ford's Rouge plant is demanded by UAW's powerful Local 600. The local says the work-week cut is necessary to save jobs, but UAW international officers point out that Ford's contract is closed until 1955.

An anti-bias case brought by CIO's packinghouse union against Swift & Co., Detroit, has won jobs for 12 Negro women. Arbitrator Ralph Seward ruled Swift didn't give them "fair and reasonable consideration" when it refused them jobs in 1950. All the union's contracts bar job bias (BW—Oct.6'51,p40).

No compensation need be paid an employee injured during an unscheduled coffee break, Florida's Industrial Commission ruled recently. It turned down a bank employee's injury claim (BW—Oct.20'51,p32).

It's payday again for Hammond Standish employees in Detroit, now that the meat packer is back in the black. Workers had voluntarily "loaned" their labor to the company for three weeks (BW—Nov.10'51,p38).

USW intervention ended a wildcat strike at the Tennessee Coal, Iron & Railroad Co., in Birmingham, after 17 days. Only a few coke-oven workers were involved at first, but eventually 26,000 were out. USW persuaded workers to return to jobs and arbitrate a work-crew dispute.

Last-minute settlement averted a CIO chemical workers strike at Sharp & Dohme last week—and assured a continued flow of plasma to the armed forces. Warned that the dispute would go to the White House, negotiators agreed, in marathon proceedings, on a 4.4% raise with a six-month reopening and a modified union-shop clause.

A 21¢ hike in the Walsh-Healey minimum rate on government contract woolen and worsted work is sought by CIO's textile union. The minimum is now \$1.05; the union wants it lifted to \$1.26 and also asks that the amount be upped 1¢ in the future for each 1.18-point rise in BLS' c-of-l index.

Leftwing unionism at work is pictured in a 128-page report issued by the Senate's Subcommittee on Labor & Labor-Management Relations. It's titled "Communist Domination of Certain Unions." The report may be obtained through the Government Printing Office in Washington.



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SMALL BUSINESS

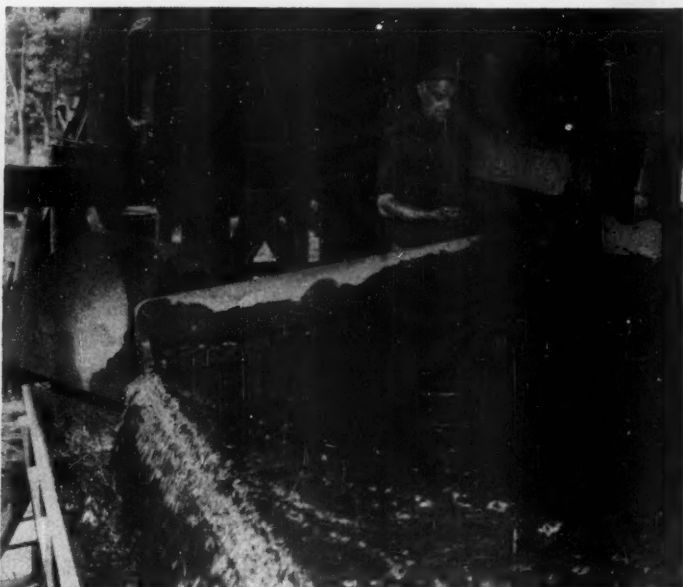


1 Powdered anthracite coal mixed with silt and muck is pumped from the Susquehanna River bottom onto barges. Steamboats

ferry the loaded barges to Central Construction & Supply Co.'s hydraulic refining plant located on the river bank, where the . . .



3 Refining plant washes the coal, sends rocks and impurities down this chute.



4 Over a ton of coal a minute passes over this shaker table at the Susquehanna River refinery at Duncannon, Pa. Plant worker checks sample for impurities.



2 Coal and silt are shoveled out for refining. About 75% of the total dredged material is coal. The rest sometimes con-

tains hidden surprises, has yielded everything from Revolutionary relics to sets of false teeth.

Coal Dredgers See the End Coming



5 Ready for use, coal is so finely crystallized it requires a forced draft to burn.

Enforcement of Pennsylvania's clean stream laws is going to be a big thing for the state in the long run. But one unavoidable casualty will be Pennsylvania's coal dredging industry. It is built, literally, on the dirt in the streams.

For years half a dozen companies have operated along the Susquehanna River, recovering an estimated 250,000 tons of river coal annually that washes down from the coal mines upstream.

• **A Big Strike**—The coal take began to run down in 1947, when former Gov. James H. Duff started to crack the whip at the collieries and enforce the antipollution laws in earnest. As a result, the mines no longer shuttle their wastes into the river, but divert them into lagoons and recover the coal themselves.

In spite of the growing uncertainty, though, the dredgers are hanging on till the river deposits run out completely. They figure they have a few more years until the state's antipollution program is 100% effective.

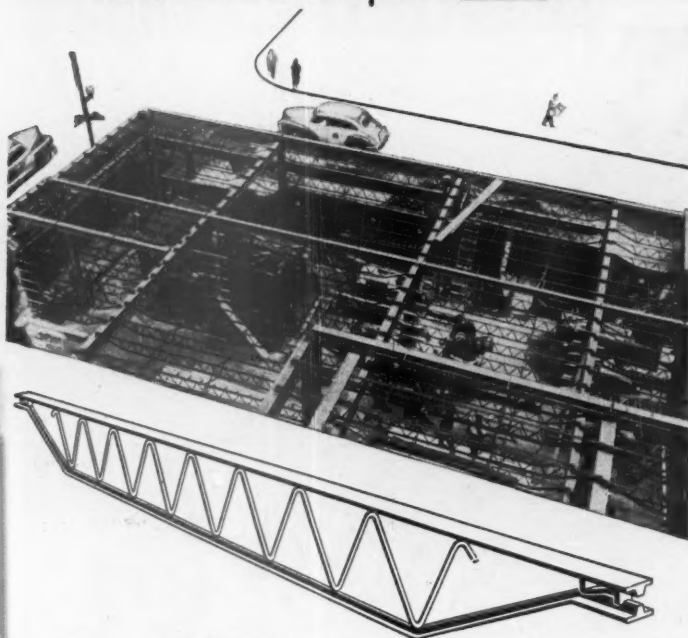
• **Still Respectable**—One of these companies is Central Construction & Supply

Co., which operates its 30-boat stern-wheeled fleet near Duncannon, about 14 miles north of Harrisburg. It still manages to dig up a respectable yield of 120,000 tons of hard coal annually. On an especially good day it may pump up as much as 100 tons. On a bad day the take can run all the way down to 15 or 20 tons.

• **Not for Amateurs**—Central and the other companies go about recovering the coal this way: Flat-bottomed scows are equipped with giant suckers powered by steam engines. They suck up the deposits from the river bottom. Stern-wheeled, shallow-water steamboats then ferry barge loads of the unrefined coal from the suckers to hydraulic refining plants on the river bank. Here impurities such as sand and stone are removed and the coal is refined for use. It takes about 1,500 lb. of river-bottom muck to make one ton of the refined product.

The dredging operation sounds easy, but it's not one for amateurs to tackle. It takes skill that would open the eyes of many a salt-water sailor. The steamboat skippers have to navigate their

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"... Downey looks wistfully back over his 50 years on the Susquehanna . . ."

DREDGING starts on p. 45

boats between the difficult, ever-changing shoals of the river. At the same time they fire their engines single-handed and manage all lines from their boat to the barges they tow. The crew of the sucker-equipped scows have only windlasses and poles to help regulate their position over the coal beds.

Ironically, the dredging companies can't use the coal they take from the river to fire the steam engines in the boats and refining plants. The anthracite is so fine that it requires a forced draft to burn.

• **Ready Market**—The dredging companies sell virtually all the river coal to industrial companies nearby. The big advantage, of course, is price: River coal sells for about \$3.50 a ton at the community where it is taken from the river. That compares with \$5 a ton for the same coal recovered at the mine and hauled to the consumer.

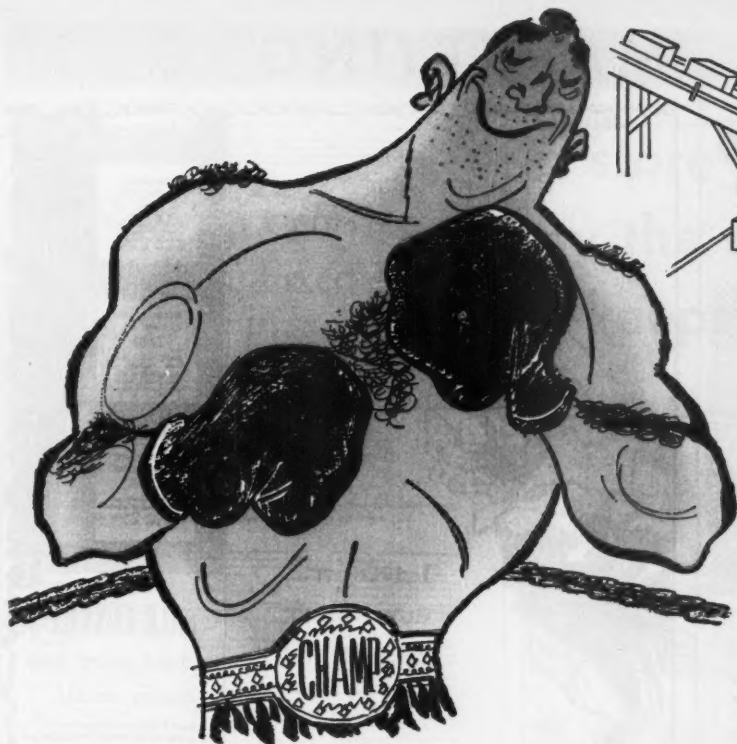
The biggest consumers in the Harrisburg area are Pennsylvania Power & Light Co. and the Steelton plant of Bethlehem Steel Co.

• **Step Down**—The whole Susquehanna coal dredging industry has taken a big step down since its early days. In bygone years, when mine operators dumped their washings into the stream indiscriminately, over a dozen operators made a \$1-million annual business out of recovering the coal. But at today's higher operating costs and the river's ever more reluctant yield, the business has dwindled to below \$750,000.

Central isn't the only major company that's feeling the pinch. Charles C. Downey, president of F. H. Downey, Inc., looks wistfully back over his 50 years on the Susquehanna. At the half-way mark, around 1930, he recalls, his company was getting about 100,000 tons of fine coal annually. In comparison, this year's take, with seven dredges operating, was a mere 20,000 tons.

• **Not All Black**—The picture has one bright spot, though. The effects of all this will leave few of the dredging companies high and dry, since the coal dredging operations are mostly conducted as side interests by companies with more substantial main lines of business.

As the river coal supply diminishes, Central, for instance, may reenter the general construction business in which it was formerly engaged. And Downey, which now owns and leases cranes for steel construction work, plans to expand that part of its operation.



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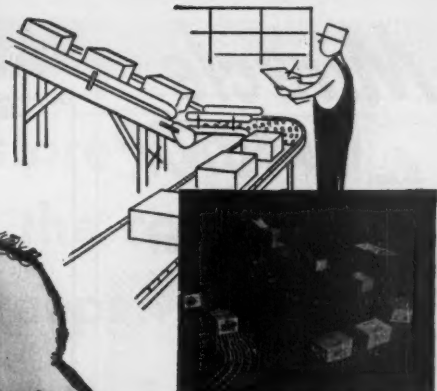
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BETTER CONVEYING EQUIPMENT

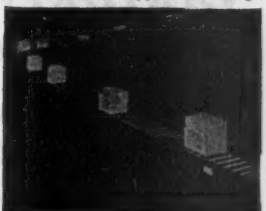
CONVEYORS • CASTERS • WHEEL-EZY® TRUCKS



Cartons flow rapidly from storage to loading docks with no re-handling



Interfloor unit moves heavy units in continuous flow to upper floor storage



Well planned systems use long gravity runs for lowest cost handling

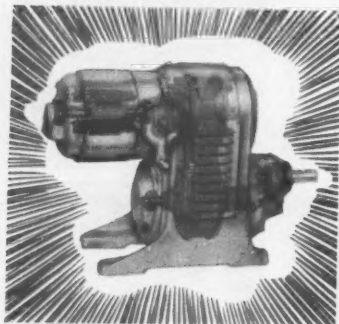


Assembly and finishing operations are simplified by gravity and power system



Portable power belt speeds stacking of goods to maximum height

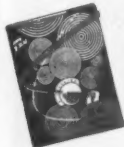
STEPS UP MACHINE OUTPUT



U.S.
VARIDRIVE
MOTOR

**INCREASES PRODUCTION
10% — 20% — 30% OR MORE**

Varidrive will give your powered equipment any and every speed needed right up or down to a split rpm. No external gearing. Simply turn the control handle for instant speed selection. Speed can be regulated to compensate for variation in operator's ability or to obtain correct rhythm of movement. Varidrive speeds compensate for changes in viscosity, temperature, line-flow or size of work handled. You get maximum output and better quality.



2 TO 10,000 RPM

"As slow as a snail or fast as a flash," or any in-between speed, enables you to get miracle performance out of your machines with Varidrive. Select speed ranges up to 10:1 variation. Sizes...
1/4 to 50 hp.

GET BULLETIN

Interesting Bulletin full of facts proving big savings you can make with Varidrive.



U. S. Electrical Motors, Inc. BW-12
200 E. Slauson Ave., Los Angeles 54, Calif.
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Send Varidrive Bulletin

Name _____
Company _____
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City _____ Zone _____ State _____

MARKETING



I SEEN IT—
BUT I DON'T
BELIEVE IT!

**SALES FINE 100%
FUR FELT HATS
4 39**

Students predicted
cycles with equal or
smaller than 100 days
or more, 43% to 74%

SALES ALL AT ONCE
RABBIT
14.50

Usually 19.85! Also
likely overpriced...
might just miss! The
region shows under
one hour, 10-15, N.Y.C.

**SALE! SUPERIOR
ALL-PURPOSE SLACKS
14.95**

Please! Continued
Study related you
our article. Brown,
May page 144.

SALE LUXURY SU
hand-picked from
costlier stocks!

Superb All-Weather Flameless Flameless Collection! And
pricing makes them 20-30% better! They ARE more expensive
by a small amount and detailed accordingly by a respected manufacturer
distinctive fabric. Solid or striped, horizontal or vertical
plaid in blue, blue-gray, gray, brown and tan, single
breasted, double breasted and unbreasted. Size 36 to 46, regular,
slim, extra slim.

A&S PLAYS UP topical Brooklyn stuff, mourns with the borough as the Dodgers get knocked out of the World Series. It also pushes national name brands, while, . . .

Brooklyn Store Makes Big

There's heresy being preached in Brooklyn these days. It holds that Gimbel's has ceased to be New York's No. 2 store.

The heretic is Abraham & Straus, the big Brooklyn department store, which now claims to have seized second place in volume of sales last year. Macy's, of course, is the city's—and the nation's—largest-volume store.

There are no official figures from Gimbels or the other major stores in the city. But A&S is prepared to back its claim with figures of its own. Here is its scoreboard for the 1950 sales volume of the city's four major stores:

- Macy's: \$150-million.
- A&S: \$69.2-million.
- Gimbels: Somewhere between \$66.3-million and \$68.2-million.
- Bloomingdale's: \$64-million.

Figures for the other stores were compiled by Harry Manley, A&S research director, from dozens of trade sources. They cover only the main stores. If you include its branches, Macy's-New

York has an estimated volume of about \$185.5-million. Gimbel's volume for the city (including Saks-34th Street and Saks-Fifth Avenue) came to better than \$112-million last year. You have to add something also for the branches owned by A&S and for Bloomingdale's, its fellow member in Federated Department Stores.

• **Gimbels Won't Tell**—What does Gimbels say to the A&S claims? Just as Macy's doesn't tell Gimbels, Gimbels won't tell BUSINESS WEEK. Bernard F. Gimbel, president of Gimbel Bros., points out that it is Gimbels' traditional policy not to disclose the sales volume of any unit in its chain. He politely refuses to make any comment whatsoever on A&S' figures.

Even by A&S' calculations, the difference between the two stores is small, and it wouldn't take much more than an extra-heavy promotion by Gimbels to swing the balance the other way. The important thing, however, is not which store places or shows. It's what

Now You Can Buy *5,978 "Price-Fixed" Items At Less Than Price-Fixed Prices —at Macy's

The U. S. Supreme Court decides that Macy's 1961 catalog was "price-fixed" and our prices—on 5,978 items of merchandise we could not sell any "half-for-half" 5¢—couldn't keep Macy's! These price-fixed prices. It's a big, exciting story.

Is it your Macy's that has a million different items of merchandise? Is it that department store that has a million different items of merchandise? Is it that department store that has a million different items of merchandise?

Is it your Macy's that has a million different items of merchandise? Is it that department store that has a million different items of merchandise? Is it that department store that has a million different items of merchandise?

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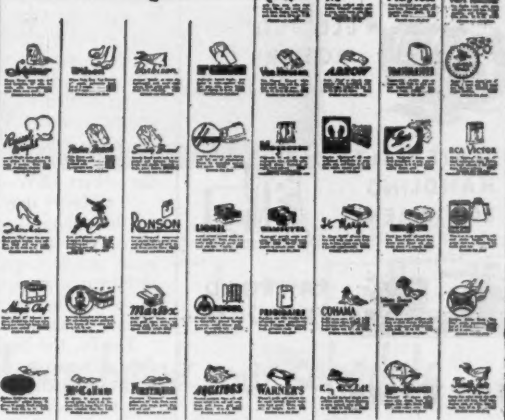
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Is it your Macy's that has a million different items of merchandise? Is it that department store that has a million different items of merchandise? Is it that department store that has a million different items of merchandise?

a store is known by the company it keeps..



Gimbels is brand name department store of the year

MACY'S hammers at price, as in this ad that touched off last summer's price war; also features private brands, while . . .

GIMBELS swings from traditional emphasis on price to a new policy of plugging national brands in contrast to Macy's.

Noise in New York Market

A&S' record reveals about the shifts in New York retailing.

• **Stretch Run**—In 1944, according to A&S' own reckoning, it lagged well behind Gimbels' volume. Its sales came to \$36.8-million as against Gimbels' \$40-million to \$41.5-million. In the past few years A&S has forged steadily ahead. Its sales have consistently exceeded the index for all U.S. department stores, whereas its figures show that New York stores as a whole have been lagging way behind the national index of department store sales.

• **Shadow of Herald Square**—It irritates A&S that few people seem to realize the store's stature. Anything, no matter how big, within the shadow of Manhattan is likely to be overshadowed.

"Even some of the manufacturers with whom we do business have no idea how large we are," says Sidney L. Solomon, vice-president and general manager of the store.

What brought A&S to its present

position? You can lay it to a number of basic appeals: a large stock, many price lines, community spirit, service. But you can't lay it to price as a primary appeal, even though A&S is known as a "promotional" store and has a huge bargain basement that's a department store in itself.

• **People Are Different**—A&S does not play price the way Macy's and Gimbels do. Kenneth Richmond, A&S vice-president and treasurer, puts the store's philosophy of selling this way:

"Stores compete with each other only on personnel. They buy at approximately the same price, sell at approximately the same price. The only thing that makes them different is people."

That any store could grow to A&S' size in New York City on this theory shows the change in the general marketing picture over the past couple of decades. Not many years ago Macy's, with its 6%-less-for-cash policy, would have waved away any competitive

threat from A&S. But the changes that have come with prosperity have made A&S' policy pay off. (This holds true, too, for Bloomingdale's, which is pretty much the same kind of store as A&S.)

• **Price War**—The price war that sliced New York retailing to ribbons during the early summer is the tipoff as to what's happened.

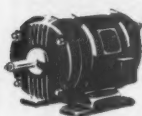
Who won the price war in the consumer's mind, Macy's or its competition? Maybe Macy's, because it started the war; maybe the competition, because they stuck with it to the bitter end. But one thing looks fairly certain: Macy's is unable any more to crack a price whip over the competition at will.

Even though Macy's touched the war off, the others—Bloomingdale's, Gimbels, and A&S—were willing to take up the challenge. It hurt, but they did stick with it. They were determined not to let Macy's open up a price gap. In other words, they were going to make certain that price didn't return as the major selling appeal. As a secondary objective, the other stores—quite frankly—wanted to discredit

An ever-increasing number of manufacturers of

• JET

AIRCRAFT ENGINES



• ELECTRIC MOTORS & GENERATORS

• MATERIALS HANDLING EQUIPMENT



• RAILROAD PRODUCTS

are using
AMWELD
RINGS
BANDS
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THE AMERICAN WELDING & MANUFACTURING CO.

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Macy's claim that it undersells all other stores.

The price war eventually petered out, but today there is still a certain amount of price jockeying on branded lines. A&S comparative shopping lists show, for example, that, at any specific time it beats Macy's on some prices, Macy's beats it on others. Frequently, the difference between the stores' prices is only a penny or two.

What it means: Other department stores in New York are now able to stand up to Macy's and slug it out.

• **The Leveling**—There are a lot of reasons why this is possible today where it might not have been a few years ago:

• The other stores, like A&S, have much greater resources with which to finance a price war.

• Macy's no longer has a clear-cut advantage over the other stores in costs. In fact, some observers figure that Macy's is now a higher-cost store than the others (BW—Oct.27'51,p150).

• Macy's may be approaching a lid on the volume from its Herald Square store. After all, there's a limit to how many people you can jam into one store or how much you can sell from a sq. ft. of space. That's a factor that affects all Herald Square stores to some extent.

Finally, the biggest point of all: Today, with prosperity, the appeal of price is not so potent as it once was. At least, it is not so overriding that other appeals aren't also effective. A&S played the long-range trends and came out on top.

• **Over the Bridge**—A&S has made a good thing of its location, which has always been sniffed at by the merchants across the river in Manhattan. A long time ago people thought Abraham & Wechsler, as it was called back in the last century, was finished. The Brooklyn Bridge, built in the 1880's, would draw all the customers into Manhattan, they argued.

But A&S' customers didn't go across the river, and neither did A&S. Instead, it played the local angle for all it was worth, always aware that there was very little to stop Brooklynites from staying on the subway past A&S and going on into Herald Square for the same nickel—or dime.

• **Decentralization**—That is still A&S' problem, in a sense. But things have begun in recent years to work around to the store's advantage. The impetus away from the crowded center of cities and into the suburbs has given A&S a big boost. Brooklyn has grown some; the rest of Long Island has grown at a startling clip. That enlarges the store's natural market area.

Furthermore, people more and more tend to stop short of crowded Herald Square and similar spots. So they drop off at A&S, or, perhaps, if they're coming in from Queens, they stop off at Bloomingdale's at 59th Street, the first

Manhattan stop. Both stores have been helped by this trend, A&S perhaps more so because of big parking lots nearby—something no Manhattan store can boast.

In fact, A&S has been so preoccupied with its own growth—it remodeled and enlarged its Fulton Street store after the war—that it only recently got around to acquiring branch stores of its own. Last year it took over a Garden City branch from Frederick Loeser (BW—Sep.30'50,p48) and started construction of a new one in Hempstead (BW—Dec.30'50,p48).

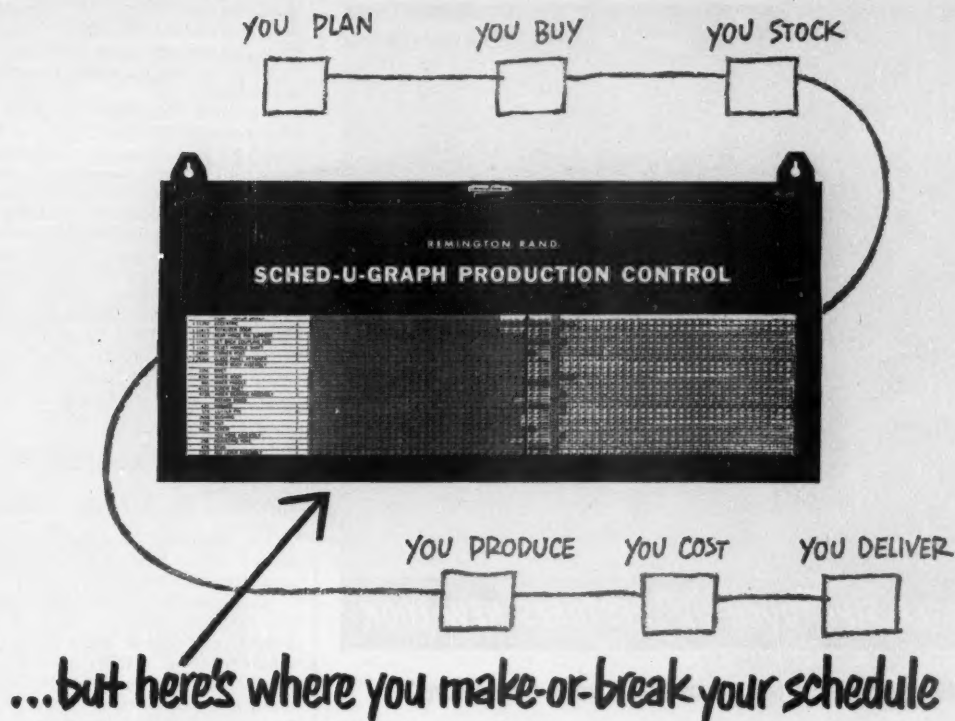
• **Reverse English**—A&S has done a lot of things with one eye on the way they're done in Manhattan and with the determination to do them just the opposite. Salespeople in Manhattan stores are sometimes curt, brusque, even downright rude. So A&S has carefully drilled a policy of friendliness into its employees.

It has identified itself with Brooklyn as much as possible. Solomon describes the store as a "metropolitan store with a hometown feeling." A&S carefully cultivates this atmosphere by playing up to Brooklyn's idiosyncrasies, by capitalizing on them in its promotion and advertising. The A&S ad that appeared the day after the Dodgers lost the playoffs for the National League pennant is a typical example (picture, page 48).

• **Sales Pitch**—A&S thinks of itself as a "community" store. It tries to get as much under one roof as you can get, to please as many people as possible. It has three beauty shops for three different price levels. It has an auditorium that's constantly in use. Its restaurant, as distinct from a tea room, is one of the last restaurants in New York department stores. The store carries high-style fashions, though admittedly only as a gesture in the face of Lord & Taylor and other chic Manhattan stores. It also carries imports and a long line of domestic brand names.

Insofar as brand names are concerned, A&S claims it has a selection that beats anything a Manhattan department store can show you. It points out that in Manhattan a manufacturer will franchise only one or two stores to handle its lines. This means they are spread thinly over a large number of stores. But the Brooklyn field is pretty much A&S' own because of its size (it is bigger than all the other Brooklyn department stores combined).

• **Built Up Stocks**—The breadth of A&S coverage is the result of a definite policy adopted during the depression. The question arose whether A&S should "trade down," should go into cheaper goods. The late Simon F. Rothchild, father of Walter Rothchild, now president of the store, was then



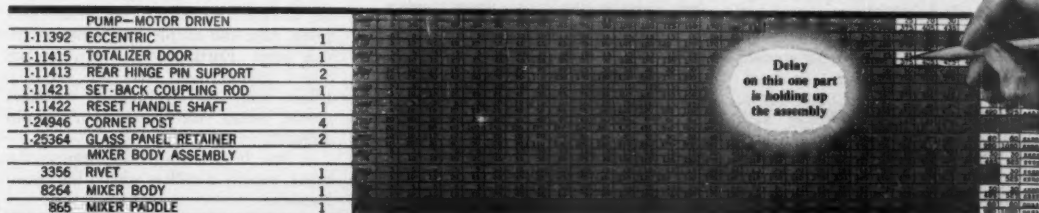
Just look below. You'll see why production men swear by Remington Rand Sched-U-Graph. This down-to-earth device *shows* you, graphically, how close each job is to schedule — *in time to take action if action is needed.*

Sched-U-Graph helped plants do "the impossible" in World War II. It is helping them again today . . . on all types of production and machine load problems. We'll rush without obligation our 32-page Sched-U-Graph Handbook (KD 341) if you'll just phone or write: Room 1512, 315 Fourth Ave., N. Y. 10. **Remington Rand Inc.**

here's how Sched-U-Graph Production Control works

Top line on this Sched-U-Graph represents a pump assembly — each line below, one component part. On each line is recorded, in advance, each day's production quota and the total to date. The sliding bar signals show work actually completed. The black vertical line indicates

today's date, and shows how much work should be done. In this case, all components but one — the totalizer door — are on or ahead of schedule, but the whole assembly is delayed. You see the delinquent in a flash, and know exactly where corrective action is needed.





FINGER-TIP "TOUCH-UP" RESTORES NEW LOOK

Is there a use for aerosols in your operations?

Gleaming white as they leave the production line, refrigerators, automatic washers and the like often become scratched, nicked or marred before they reach the customer. It's a problem that has long plagued the makers of home appliances. Today, many manufacturers solve it by making available, to distributors and service organizations, kits of aerosol-packed paints in matching colors.

Now, when an appliance is scratched in transit or handling, distributors quickly restore the shiny finish merely by pushing a button or valve on the aerosol package. It's as simple as that... no fuss or muss... no special skill required. Anyone can use these aerosol-packed paints for expert touch-up on the showroom floor... or, right in the customer's home. These new touch-up paints in handy, palm-size containers are economical... eliminate the need for brushes, bulky equipment, or spray guns. When empty, you simply throw them away. If you aren't using aerosol paints, it will pay you to investigate them.

There are countless uses for aerosol pressure-packed products—in business, industry, as well as the home. Most aerosols contain a "Freon" safe propellant which effectively and economically expels the active ingredient (in this case, paint) in the form of a cloudlike mist.

Many companies have found that aerosol packaging has stimulated sales of their own products formerly packed in old-style containers, and surveys show that aerosols are steadily gaining in popularity. If you have a product which could be aerosol-packed, you'll be interested in "Package for Profit"... a 32-page booklet (sent upon request) about the aerosol market and the use of "Freon" propellants... most popular and widely used because they are safe, nonflammable, of extremely low-order toxicity and assure the satisfactory performance of all types of aerosols. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Room 7529N, Wilmington 98, Delaware.

NOTE: Du Pont supplies only the "Freon" propellants used in aerosol packages and does not market the finished product.



Better Things for Better Living... through Chemistry



board chairman. He set the policy with the observation: "It doesn't make a damn bit of difference whether you trade up or down; it's whether you keep on trading."

Since that time A&S has given up what Solomon calls its "fetish for low stock and high turnover." Today, says Solomon, "we have considerable money invested in our inventories." In short, A&S bet on prosperity by extending its stocks across the board. The process of upgrading has gone on ever since.

In this sense what A&S has done reinforces Gimbel's latest gambit. Gimbel's has decided to stress brand names (BW-Aug. 21 '51, p. 83). This is also a product of prosperity; it results from a desire of Gimbel's to do essentially what A&S has done to upgrade itself.

Distillers Disagree Over Tax Grace Period

The distilling industry is headed toward a squabble over the government's tax laws on whiskey.

It's a question of how long whiskey can be aged without incurring the \$10.50-a-gal. federal tax. As the law stands now, the distiller can keep his whiskey in bond for eight years. During that period he is not liable for the tax unless he withdraws the whiskey. At the end of the eight years, he becomes liable whether he withdraws it or not.

The tax setup thus tends to control how long the whiskey is aged. Few distillers can afford to pay the tax and then keep the stuff in bond after that. This raises a question that frightens some producers who are holding large stocks: How are they ever going to be able to pay the tax when those floods of whiskey they've been turning out come of age?

It's a serious question. On Aug. 31 whiskey stocks stood at a record 756.4-million gal. In a few years a lot of this postwar liquor will hit the eight-year mark.

• **Want 10 Years**—One segment of the industry is now starting a campaign to get the government to extend the grace period to 10 years.

Not all distillers go along with the campaign. Independents tend to oppose it because they fear extension of the grace period would merely send the big distillers off on another production spree, raise the supply to a nine- or 10-year level. Furthermore, they fear the added competition that the big distillers' nine- or 10-year-old whiskeys would mean for their four-year-old straights.

A few big distillers also oppose the move, mostly distillers with a big blend business.



THE LAST RUN ... *Boston, December 24, 1900*

IT WAS GROWING LATE on that long-ago Christmas Eve. The last tired team clopped to the end of the Marlborough Street line and headed into the barn. For the horse cars, it had grown very late. Here and there, across the country, a few of the colorful old vehicles were to continue for a time. But for the most part the horse cars had finished their work. Their romantic era was ended.

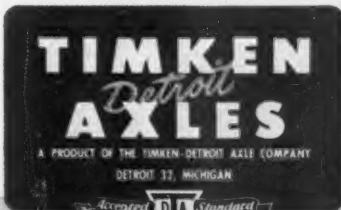
People liked the horse cars. Yet, for obvious reasons, scarcely a tear was shed over their passing. *Better and more effective public transportation had come to take their place!*

The trend continues. Today, in progressive cities from coast to coast, this means just one thing: Rubber-Tired Transit! Here, as in the motor truck field, Timken-Detroit plays a major part. More and more transportation systems are standardizing on Timken-Detroit-equipped buses and trolley coaches—primarily because these mod-



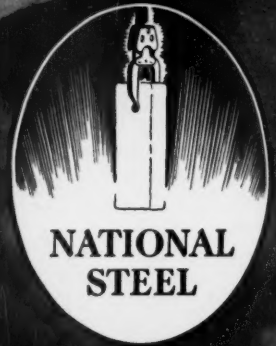
ern vehicles are more economical and dependable—because they more consistently satisfy the needs of the public.

Most important, they are *experience-engineered* to keep maintenance costs at a minimum. All trolley coaches and most motor buses built today are equipped with Timken-Detroit Axles and Brakes—just like the finest of America's trucks. For a generation, Timken-Detroit engineering has bulked large in the constant improvement of heavy-duty motor vehicles for all uses.



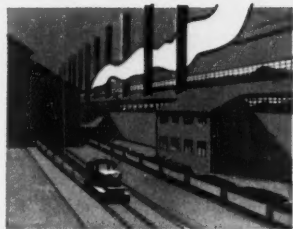
WORLD'S LARGEST MANUFACTURER OF AXLES
FOR TRUCKS, BUSES AND TRAILERS

PLANTS AT: DETROIT AND JACKSON, MICH. • OSHKOSH, WIS. • UTICA,
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This is National Steel



GREAT LAKES STEEL CORP.

Detroit, Michigan. The only integrated steel mill in the Detroit area. Produces a wide range of carbon steel products . . . is a major supplier of all types of steel for the automotive industry.



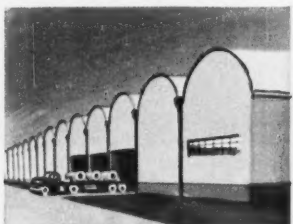
WEIRTON STEEL COMPANY

Mills at Weirton, West Virginia, and Steubenville, Ohio. World's largest independent manufacturer of tin plate. Producer of a wide range of other important steel products.



STRAN-STEEL DIVISION

Unit of Great Lakes Steel Corporation. Plants at Ecorse, Michigan, and Terre Haute, Indiana. Exclusive manufacturer of world-famed Quonset buildings and Stran-Steel nailable framing.



NATIONAL STEEL PRODUCTS CO.

Located in Houston, Texas. Recently erected warehouse covers 208,425 square feet. Provides facilities for distribution of steel products throughout Southwest.



NATIONAL MINES CORP.

Coal mines and properties in Kentucky, West Virginia and Pennsylvania. Supplies high grade metallurgical coal for the tremendous needs of National Steel.



HANNA IRON ORE COMPANY

Cleveland, Ohio. Produces ore from extensive holdings in Great Lakes region. National Steel is also participating in the development of new Labrador-Quebec iron ore fields.

Steel-making at National Steel encompasses far more than its mighty furnaces and giant mills.

Added to these, are the iron ore mines and coal mines . . . the giant ore boats, barges, trucks . . . the multitude of other physical properties it takes to make a completely integrated steel producer.

National Steel achieved this completeness by combining the facilities and resources and talents of its large component companies into the organization that has become the nation's fifth largest producer of steel.

It has extended its scope through continued expansion and ceaseless improvement. Today, for example, National Steel operates the largest and fastest electrolytic lines in the world . . . the largest open hearth furnaces in the industry. And National Steel is still expanding . . . still developing better ways to make steel. This is National Steel . . . complete, independent, progressive . . . one of America's largest and fastest growing producers of steel.

← A color reproduction of this painting . . . in larger size for framing . . . will be mailed on request.



THE HANNA FURNACE CORP.

Blast furnace division of National Steel located in Buffalo, New York.

NATIONAL STEEL CORPORATION

GRANT BUILDING



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SERVING AMERICA BY SERVING AMERICAN INDUSTRY



HOSE HARNESS FOR THE IRON HORSE

Airpower replaced manpower for railroad braking with the adoption of the automatic air brake. But for almost 40 years after its invention by George Westinghouse in 1869, failures plagued air brake users.

Source of the trouble lay, not in the brake, but in the system's "life-line"—the coupling hoses that carried the air-line from car to car. Existing hose couldn't stand the strain of constant flexing, sudden strong pressures, weathering and ballast scuffing.

Improving airline performance became a challenge to Hewitt-Robins. By investigating all the causes of coupling

hose failures, we succeeded in designing the first hose that solved the problem. Hewitt-Robins Air Brake Hose made history . . . it was the first rubber product ever scientifically designed to meet a specific industrial need.

Developing better rubber products for industry to facilitate the handling of gases, fluids and solids has been the specialty of Hewitt-Robins for almost a century.

If you have a hose problem—or any bulk materials handling problem—have Hewitt-Robins solve it for you. Hewitt-Robins maintains offices and has distributors in all major cities.



For air brake coupling, or any other application . . . wherever hose is used in industry . . . Hewitt-Robins has designed over 1,000 types. You'll find one to meet your most exacting needs.

HEWITT ROBINS

Executive Offices: 370 Lexington Avenue, New York 17, N. Y.

HEWITT RUBBER DIVISION: Belting, hose and other industrial rubber products
ROBINS CONVEYORS DIVISION: Conveying, screening, sizing, processing and dewatering machinery
ROBINS ENGINEERS DIVISION: Designing and engineering of materials handling systems
HEWITT RESTFOAM DIVISION: Restfoam® mattresses, pillows and comfort-cushioning
 Hewitt-Robins is participating in the management and financing of Kentucky Synthetic Rubber Corporation

MARKETING BRIEFS

The biggest first printing in 25¢ book history is what New American Library calls its forthcoming edition of Mickey Spillane's *The Big Kill*. 2.5-million copies of the mystery will come off the presses Dec. 12.

TV and radio sales slump showed up in the report of DuMont Laboratories for the 40 weeks ended Oct. 8—a net loss of \$319,547. President Allen B. DuMont said his company had halved inventories in the past months, but it took a lot of price and credit inducements to do it. Radio & Television Mfrs. Assn. reports 768,766 sets in factory inventories in October, 1951, compared with 72,345 in 1950.

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BUSINESS WEEK • Dec. 1, 1951

Production News

ABOUT *Lusol*—THE ALL-CHEMICAL METAL-WORKING SOLUTION

FROM F. E. ANDERSON OIL COMPANY • PORTLAND, CONNECTICUT

LUSOL—THE HOTTEST THING ON THE COOLANT MARKET

Today, right now, you can take the first step toward startling production gains in your own shop. The free book, offered below, gives you the facts about Lusol, the metal-working solution which is revolutionizing coolant practices and machining procedures. You'll learn how plant after plant, all over the country, has stepped up output from nearly every machine in its shop. Actual case histories of 50%, 200% and even 500% increases in machine speeds and production rates!

Lusol replaces soluble oils and emulsions, as well as regular cutting oils on many operations.

NEW TYPE COOLANT—The simple, factual evidence in this book shows why Lusol cools faster, increases tool life, reduces the number of grinding wheel dressings. You'll see how Lusol, an oil-free concentrate added to water, makes the best coolant you ever used. How it makes water wetter, so it removes heat faster. How it decreases the surface tension of water, so it penetrates to the very cutting edges of your tools and keeps grinding wheels from loading up.

You'll learn the extra advantages possible with oilless Lusol. Advantages like elimination of degreasing before painting or assembly. How floors and workers' clothes stay cleaner. No oil-soaked shoes. How Lusol licks machine odors and dermatitis. And how it protects machines and products from rust.

SAVINGS IMPRESSIVE—Truly, these are savings so important and far-reaching that no one who owns or operates a machine tool can afford to pass them up. So today, take time to ask for your copy of the 20-page book, "Lusol, the all-chemical metal-working solution."

Over 40,000,000 gallons of LUSOL SOLUTION USED TO DATE

In plants all over the nation, in almost every type of metal-working operation, over 40,000,000 gallons of Lusol solution have been used, boosting production rates, saving tools and lengthening grinding wheel life.

In each of these applications Lusol has replaced another coolant, showing substantial savings. Obviously, an enormous amount of technical know-how has been accumulated during these conversion periods. This data is constantly sent to Lusol sales engineers in the field. Your local Lusol sales engineer, listed in the classified phone book under "cutting oils," is well equipped to answer your questions.

users say*

case histories of Lusol at work

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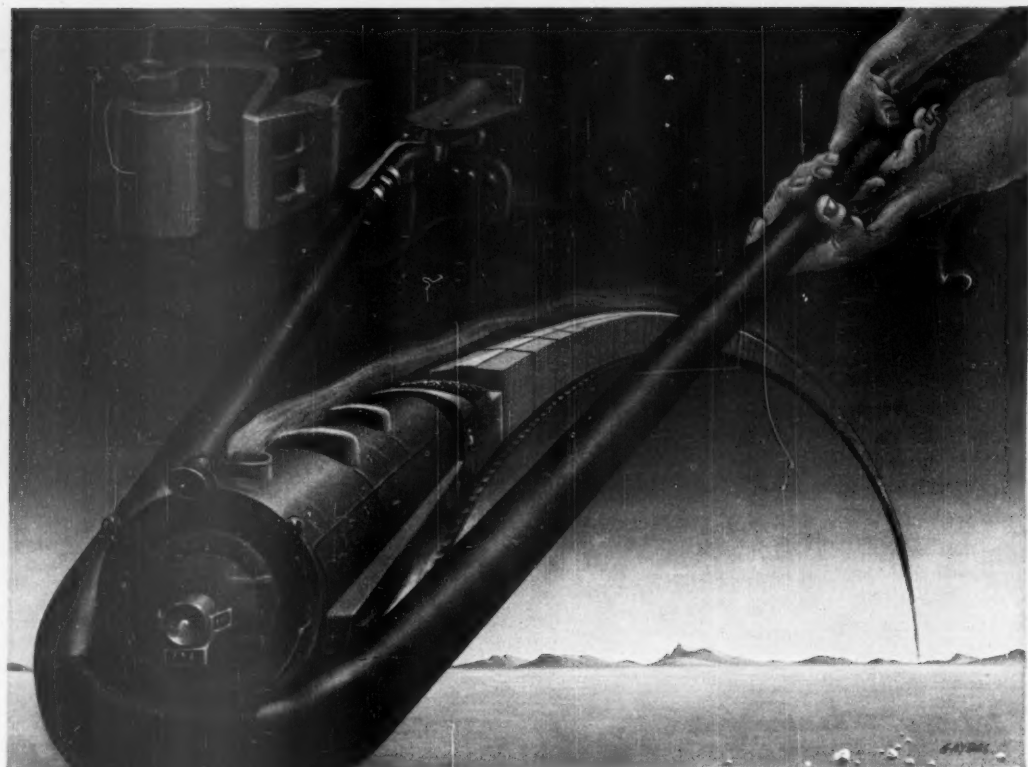
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HOSE HARNESS FOR THE IRON HORSE

Airpower replaced manpower for railroad braking with the adoption of the automatic air brake. But for almost 40 years after its invention by George Westinghouse in 1869, failures plagued air brake users.

Source of the trouble lay, not in the brake, but in the system's "life-line"—the coupling hoses that carried the air-line from car to car. Existing hose couldn't stand the strain of constant flexing, sudden strong pressures, weathering and ballast scuffing.

Improving airline performance became a challenge to Hewitt-Robins. By investigating all the causes of coupling

hose failures, we succeeded in designing the *first* hose that solved the problem. Hewitt-Robins Air Brake Hose made history... it was the first rubber product ever scientifically designed to meet a specific industrial need.

Developing better rubber products for industry to facilitate the handling of gases, fluids and solids has been the specialty of Hewitt-Robins for almost a century.

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For air brake coupling, or any other application... wherever hose is used in industry... Hewitt-Robins has designed over 1,000 types. You'll find one to meet your most exacting needs.

HEWITT ROBINS

Executive Offices: 370 Lexington Avenue, New York 17, N. Y.

HEWITT RUBBER DIVISION: Belting, hose and other industrial rubber products

ROBINS CONVEYORS DIVISION: Conveying, screening, sizing, processing and dewatering machinery

ROBINS ENGINEERS DIVISION: Designing and engineering of materials handling systems

HEWITT RESTFOAM DIVISION: Restfoam® mattresses, pillows and comfort-cushioning

Hewitt-Robins is participating in the management and financing of Kentucky Synthetic Rubber Corporation

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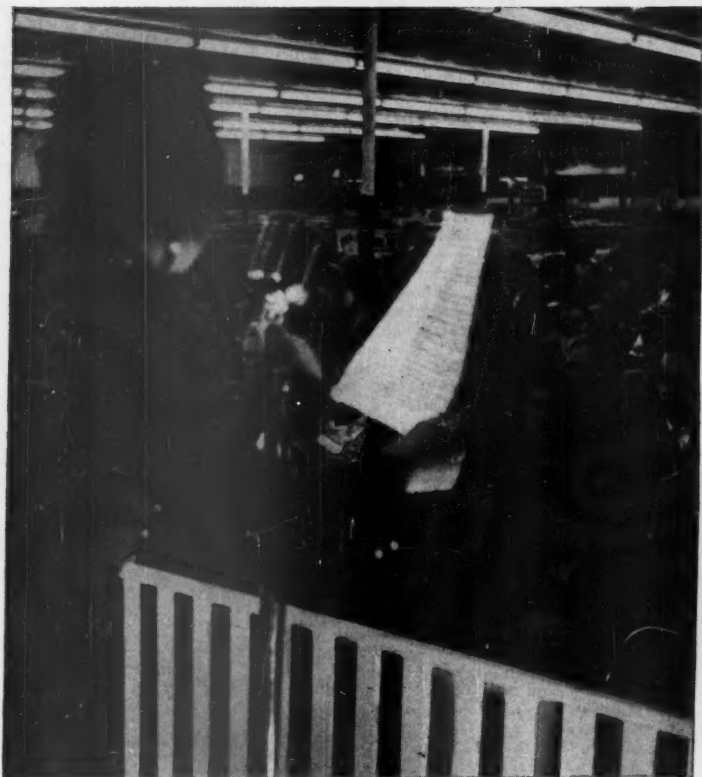
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JOHNNY Philip Morris' ubiquitous bellhop makes sure to be on hand for opening of new First National supermarket in Mt. Vernon, N. Y.



STORECAST Over public-address system, Johnny inter-



AUTOGRAPHS At a high spot in midst of Philip Morris display Johnny signs cartons of cigarettes for customers.

Supermarkets Cigarettes



FINALE Johnny moves away from First National store, heading



views housewives, hands out cartons of Philip Morris cigarettes.

Are the Place Get Sold

(Story begins on page 60)



for other personal appearances—many of them at food stores, too.

BUSINESS WEEK • Dec. 1, 1951

Could these put you out of business?



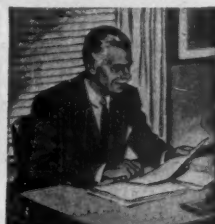
1 COULD ASHES SUBSTITUTE for your accounts receivable? Could charred bits of paper take the place of tax records, inventory records or payroll records? Not on your life! Without these vital records you'd be fortunate to stay in business.



2 A FIREPROOF BUILDING is no guarantee of protection. Firemen will tell you fireproof buildings merely wall-in and intensify fires that start inside an office.



3 AND A HEAVY-WALLED, old unlabeled safe is no security either. Such safes act as incinerators when the temperature gets above 350° F. They char records to ashes!



4 FIRE INSURANCE is fine. But remember that in order to collect fully you must prepare a proof-of-loss statement. How could you do it if your vital records were destroyed?



Mosler "A" Label Record Safe with built-in money chest for combined protection against fire and burglary

Keeping irreplaceable records in a metal cabinet or an old safe that does not carry the label of the Underwriters' Laboratories, Inc. is a dangerous gamble. It's a gamble that could completely ruin your business future. Your accounts receivable ledgers, tax records and inventory records cannot be duplicated. Without them you might be forced out of business.

Remember this fact: 43 out of 100 businesses that lose their records by fire never reopen.

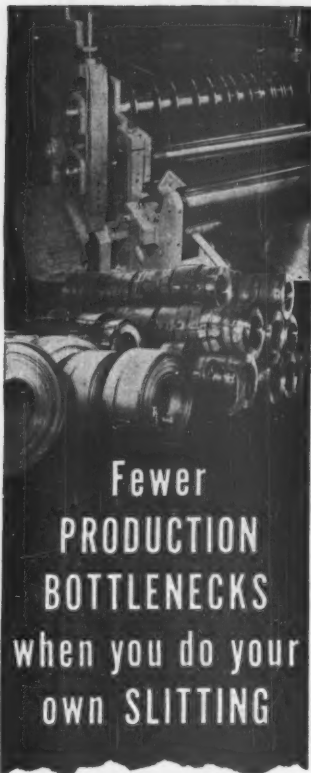
Don't stretch your luck any further! Get positive protection for your records and the future of your business with a modern MOSLER "A" LABEL RECORD SAFE. This safe has passed the severest test given by the independent Underwriters' Laboratories, Inc. for fire, impact and explosion. That's what the "A" Label means. Look for this label on your safe.

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Please send me free booklet giving the latest authentic information on how to protect the vital records on which my business depends.
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5530 Walworth Avenue • Cleveland 2, Ohio

**Rotary
Gang
SLITTERS**



"... At least 40% of all cigarette sales now take place in food markets . . ."

CIGARETTE pictures begin on p. 58

Philip Morris & Co.'s living trademark, Johnny the bellhop, spends most of his time showing up at sales outlets to push his company's cigarettes. His appearance last week at the opening of the First National supermarket in Mt. Vernon, N. Y. (pictures, page 58), marked no new departure. These days Johnny is going to more and more grocery stores. In just one recent week, the little man with the piercing voice visited four supermarkets.

• **Change of Pattern**—This dramatically points up a slow but marked change in the marketing pattern of cigarettes. Today at least 40% of all cigarette sales take place in food markets—three or four times as many as there were 20 years ago. That means that of the 375-billion cigarettes sold this year at least 140-billion will go through the hands of grocers. And for them, the grocers will pay manufacturers \$1-billion.

This change has not come about overnight; it has been a gradual, almost imperceptible thing until recently. Only now, in fact, have the cigarette companies begun to wake up to the great potential that the grocery stores have for them. As a result, you can count on seeing more and bigger advertising and merchandise displays in food stores in the future.

• **The Happy People**—The trend of cigarettes sales toward food stores makes both the tobacco companies and the grocers happy. For the tobacco men it means much greater floor space that they can use to push their products advertising-wise. It also means heavier sales. The reason for that is that almost all cigarette sales in supermarkets and other food stores are carton sales—housewives buy them when they are doing their regular shopping both as a time-saver and as an economy measure.

Of these two things, economy is the most important. In food stores, the housewife can buy a carton of cigarettes for 5% to 10% less money than she would pay for a carton at the corner cigar or drug store. It's easier for her, too—the cigarettes are right there within easy reach every time she makes her trip to market.

• **High Profits**—Despite the lower sale price, the food markets are the one group of merchants who can make money selling cigarettes. The percent margins are lower on cigarettes than on many other grocery items. Yet dealers claim that they get higher dollar volume than in most other things.

There are lots of reasons for this—



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CROWN BLOCKS
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ESTABLISHED 1866
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COMPANY**
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high unit price on cartons, ease of handling, relatively small floor space needed for display and promotion, the fact that food markets alone really push carton sales. But most important of all is the lightning turnover. The grocery department as a whole usually has a turnover of 12 to 18 times a year. On cigarettes, turnover will run between 50 and 75 times.

What this means is that the profit per sq. ft. of floor space is higher on cigarettes than on any other item in a grocery store, especially in supermarkets. A midwest chain, for example, reported that a survey of its stores showed that cigarette sales brought a net profit of \$16.40 per sq. ft. per year. Next highest was drugs, at \$13. Coffee, a major grocery item, netted a profit of only \$6.45 per sq. ft. Other chains report the same sort of figures.

• **The Unhappy People**—But there are also a lot of people who are unhappy about this trend. Mainly, they are the small stores that once counted heavily on cigarettes. But the changing patterns of marketing, taste, and economics began to hit such places hard 20 years ago. First to feel the change was the corner cigar store, back in the early 30s. They began to branch out in other lines so that they could stay in business. And just lately D. A. Schulte, Inc., has added something more—snack bars (BW—Oct. 13 '51, p. 124).

It wasn't the food markets that took the big business in cigarettes directly from the cigar stores. In the depression, cigarettes got to be a marketing football. Everyone cut everyone else's price to lure customers. In the process, the drug stores—especially the cut-rate stores—took over a nice chunk of the business. But it looked nicer than it was: Nobody made much money. And while the price war was still popular, cigarettes became loss-leaders in some cases, were used just to get people into the stores.

• **Cigarette Boom**—Meanwhile, a combination of world tension, price wars, prosperity, and fabulous advertising budgets combined to double cigarette sales just within the past 10 years. Other factors have helped, too—especially the growing population of the U.S. On top of that, older people who never smoked cigarettes are dying off and being replaced by confirmed smokers. And the war changed 17- and 18-year-olds from pipe smokers to cigarette smokers.

To tobacco men, all these things spell good news for the future. There is no indication that the trend toward greater cigarette consumption has slowed down at all. And since the food stores provide the biggest outlet so far, and offer much broader promotional opportunities at the same time, cigarette companies think that they can keep sales climbing.



There may be quail today on the site of your future new plant or branch.

A lot of new factories are going out into the country, these days—away from the congested cities. They're going out where plants can sprawl economically over many acres instead of rising expensively up into multi-story construction. They're going out where employees like to work. They're going out, incidentally, where "security is served." Out (I hope) somewhere along the B&O.

B&O Industrial Development (plant locating) men have found sites for over a billion dollars' worth of plants in the past several years. The B&O is a bird of a bird dog for flushing out new plant locations.

You may think it's the wrong time or too early to talk to anybody about the location of your new plant. But let me sell you on the wisdom of calling in a B&O man while your plant ideas are still in the formative stage. He may help you think along better lines. He can show you actual photographs of many new, modern plants. He knows facts and figures about different types of plants and different locations.

The B&O man will be a clam about what you tell him. He knows you don't want your competitors to hear what you are thinking, and he knows

The heart of America's markets and the treasure land of the "lion's share" of American industrial resources.



BALTIMORE & OHIO RAILROAD

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how to hunt sites without tipping off prospective sellers.

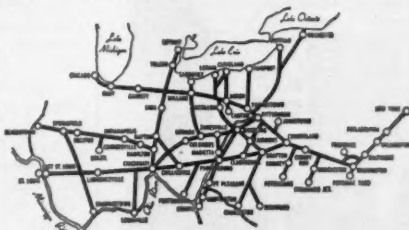
Here are 11 basic considerations in plant location: POWER • LABOR • WATER • FUEL • SITES • RAW MATERIALS • WEATHER • MARKETS • TRANSPORTATION • TAXES • VARIABLE FACTORS.

B&O's Industrial Development men know that you may put two or three of these factors way up at the top. They'll help you size up the situation with that in mind. Their outfit has industrial engineers, geologists, real estate men and others, with the know-how and the experience to give you a plant location report which will surprise you with its scope and profundity. No, you can't pay for it, and you're under no obligation!

The B&O has Industrial Development representatives at:

New York 4. Phone Digby 4-1600
Baltimore 1. Phone LExington 0400
Pittsburgh 22. Phone COurt 1-6220
Cincinnati 2. Phone DUbar 2900
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Our folder, "A Winter Wonder", tells you what the movie covers and how to apply for a showing. Send for your copy now. Write A. M. Byers Company, Clark Building, Pittsburgh 22, Pa.



BYERS
WROUGHT IRON

MANAGEMENT



1 Once upon a time there was a small New York luncheonette owner with a problem: plenty of business, but little or no profit. He couldn't solve it himself.



2 So he knocked on the door of a man trained in operations research. That's the name a group of scientists give to a scientific probe of an operation.

Operations Research Is

The cartoon strip above shows how a technique called "operations research" solved a management problem. In just one week a young researcher, now on the staff of Dunlap & Associates, management engineers, was able to show a New York luncheonette operator why he was losing money.

The researcher spent a couple of days at the luncheonette, then analyzed receipts from the counters and booths. Then he came up with an answer that was startling in its simplicity: Put in more counters, cut down on the number of booths.

In this case the cure was so obvious that most businessmen will question whether "operations research" is anything but good common sense. That's all it is, OR men will agree. But they point out that common sense can often be an elusive trait, even among businessmen. Or, rather, the basic simplicity of a problem is lost in the mass of detail in the business, and it takes both scientific methods and a fresh, objective eye to recognize the simple cure.

Operations research tries to find logical sense in all the detail. It finds out why things happen as they do, then goes on to predicting.

• **Management Gets a Look**—A couple of weeks ago many businessmen had their first real look at operations research. Top men in the field spoke at seminars held by American Management Assn. in Chicago and the Case Institute of Technology in Cleveland.

The more intensive study was at Case Institute, where 200 management men

spent three days listening to lectures and attending clinics. By the time these businessmen were through, they had a pretty good idea of what science has to offer them.

For the average businessman, OR isn't any radical new device or magic formula—it's simply a fresh way of looking at things. A business problem gets the scrutiny of someone who is: (1) detached, with no preconceived notions about the business and about what causes what, and (2) familiar with the various mathematical, statistical, and other investigation tools used around any good research laboratory.

• **The Key Tool**—By far the most powerful of these tools is this: to reduce every possible problem to quantities that can be measured and then analyzed mathematically. Over the last couple of centuries, scientific researchers have found ways to measure lots of things the untrained man would assume can only be talked about.

Business is full of problems that seem to involve intangible factors and things that can't be compared with each other—so many that you'd think they could be dealt with only on a basis of intuition and judgment. As any businessman knows, you can't add apples and oranges. However, any professional mathematician knows it's easy to add apples and oranges; you just call them fruit.

People with laboratory training can often find ways to reduce "intangible" problems to forms that can be analyzed and brought to a definite solution by



3 The operations researcher quickly noticed one thing: Most of the man's trade was at the counter, a lot less at the booths (which cost more to run, anyway).



4 The happy ending: The little businessman enlarged his counter space, cut the booths to the minimum needed for cranky customers. Result: He's in clover.

Scientific Common Sense

straightforward mathematical methods. The mathematical solution often involves long, tedious computation, but modern calculating machinery is so fast as to make that unimportant.

• **The Luncheonette**—Take the luncheonette case again. Suppose the company had owned a hundred stores instead of one. It isn't hard to see how the simple solution could have been lost in a jumble of accounting data.

If the stores were in various types of location, had varying amounts of business, were designed somewhat differently, had different types of manager, and had variations in profits—management then could spend a lot of time and money without succeeding in finding out why some units were profitable, others weren't.

The operations researcher would shun trial-and-error. He would start with the basic assumption that there must be some pattern common to all the stores. He calls this pattern an "operational constant."

In the 100-store chain, the researcher would soon discover that the stores that made the most money were the ones with the largest counters and the fewest booths. He could show an operational constant between dollar profit and the ratio of counter space to booth space, regardless of the store's location or the ability of the manager.

• **Cost Estimate**—Before management would act, however, it obviously would have to be assured that the theory was right. Here's where the operations researcher makes his biggest appeal to

dollars-and-cents-minded businessmen. He would determine (1) how much it would cost to make a test by remodeling one or two stores, (2) how much it would cost in lower profits if changes weren't made, and (3) how much increased profit could be expected.

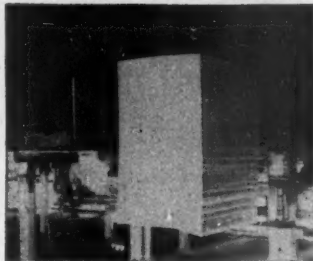
Management would have to make the decision, of course. But at least it would be armed with full data.

• **Technique Not New**—Many men attending the AMA and Case seminars noted that techniques used by OR (such as the theory of probabilities, statistical analysis, scientific sampling) have already been applied in many areas of industry. OR people say the applications are spotty. They want to spread such techniques into general management problems. They want to do for business what they did for the armed forces in World War II.

The whole idea, even the name, originated in the war. Scientists in Britain were called on to solve an operations problem: how to get the most out of Britain's limited airpower in the Battle of Britain. Results were so favorable that scientists were afterward assigned to most Allied staffs. Military men found the scientific brain advising them on what pattern to adopt for a convoy, or how often to fire a gun, or where to drop a salvo of bombs, and how often.

• **Critic**—The industrial field may prove less fertile for the scientists. J. Bronawski, director of the Central Research Establishment of the British National Coal Board, reviewed a book, *Methods*

**NOT 1¢
SPENT ON THIS
FLOOR
IN 10 YEARS**



(Duncan Litho. Co., Ltd. Manufacturers of Lithographed Labeled Cartons and 24 sheet Posters. Hamilton, Ont.)

Over 10 years ago, Duncan Lithographing Co., Ltd. laid down a smooth resilient floor with Tremco Mulsomastic—a low cost type of heavy duty industrial flooring.

8,000 lbs. of paper stock piled on flat trucks like the one shown above pounded this floor unmercifully all through the years—and not one cent was paid out in floor maintenance. A recent examination by R. J. Westell of Tremco showed this floor to be still in excellent condition and free from dusting, a vital factor in the preparation of fine lithography.

Talk about economy! Here is an example of flooring economy that is unique, yet only one of many such installations serving and saving in thousands of industrial plants and public buildings all over Canada and the United States.

Tremco flooring methods can be employed to make floors resilient, warm, waterproof, fireproof, vermin-proof, etc. Tremco Mulsomastic flooring can be applied over most types of floors at a cost lower than it takes to replace the original floor.

A Tremco Man can show you sizable savings over other methods because in many instances he will enlist the aid of your own maintenance men, or a local contractor to complete the job, following his instructions.

The Tremco Manufacturing Co., Cleveland, Ohio and The Tremco Manufacturing Co. (Canada) Ltd., Toronto.



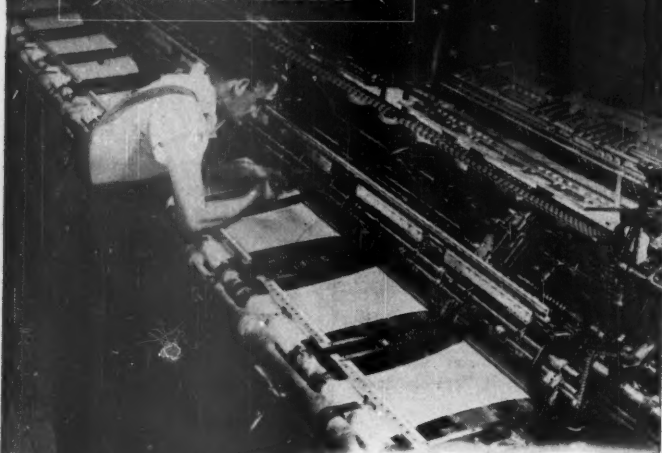
R. J. Westell
Tremco Man

TREMCO

PRODUCTS AND METHODS
FOR BUILDING MAINTENANCE

ESTD 1908

Success stories of 3
CARBOLOY
CREATED-METALS



WEAR WAS choking production, zooming costs in the manufacture of nylon stockings. But Carbony engineers had the answer . . . an application of Carbony Cemented Carbide, one of the miracle Carbony metals.

Gentler on a lady's leg than on a stocking machine

SOFT, SHEER nylon, so dear to the female heart, can cause plenty of heartaches in the textile mill. Nylon threads whizz through machines, chew steel or porcelain guides into frazzles in days or hours.

Now, textile guides are made of Carbony Cemented Carbide, miracle metal for resisting wear . . . and they last for years!

Cemented carbide for machining and wearproofing applications is just one of the mass-produced Carbony created-metals. Others include Carbony Alnico permanent magnets for lasting magnetic energy, and Hevimet for high density and radioactive screening.

MASTERS IN METALS

Do you have a design or production problem that needs the master touch of one of these man-made metals? To speed up output somewhere along the line? Or lower downtime, reduce costs? Or help you come up with a finer, sturdier, longer-wearing product?

Carbony experts know their

man-made metals . . . can give you any practical answer available today on their use. Look to Carbony metallurgists for still more pioneering in even broader fields of use for these and other created-metals.

Why not write regarding your needs?

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DEPARTMENT OF GENERAL ELECTRIC COMPANY

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ALNICO PERMANENT MAGNETS
for lasting magnetic energy

CEMENTED CARBIDES
for phenomenal cutting, forming, wear resistance

HEVIMET for maximum weight in minimum space, and for radioactive screening

FIRST IN MAN-MADE METALS FOR BETTER PRODUCTS

"... 'a painstaking combination of cost accountancy, job analysis, time and motion study' . . ."

MANAGEMENT starts on p. 62

of Operations Research, by Philip M. Morse and George E. Kimball. He said:

"What was new and speculative on the battlefield turns out, in the practical affairs of industry, to become only a painstaking combination of cost accountancy, job analysis, time and motion study, and the general integration of plant flow."

That just about sums up the attitude of many management men who attended the Case seminar. Large corporations already have the nucleus of OR teams in their industrial engineering, market research, methods analysis, and statistical departments. They would need to add only a scientist or two familiar with the latest techniques to have OR in fact, if not in name.

• **Today's Uses**—To be fully effective, an OR team—whether built around company cadres or hired from outside consultants—must have free access to all information, must be able to cut across lines of authority, must assume no management responsibilities. In addition, management would have to be willing to experiment on its company operations.

OR is already being used—as such—in industry today. One estimate puts the total at 100 companies using OR, plus about 10 universities that are willing to send out teams on a consulting basis.

Yet there's room for expansion by the companies themselves. And there's room for such established management consulting companies as Dunlap & Associates and Arthur D. Little & Co. to apply OR methods.

• **Accomplishments**—An outside team of OR experts solved a problem of inventory for Johnson & Johnson recently. The company set down three goals: (1) to fill orders from an eastern plant without any back orders, (2) to maintain steady employment, (3) to stock the smallest possible inventory.

Within a few weeks, the OR team came up with a mathematical formula the company could use. It cut the inventory in one case by 40%. To solve the problem, the OR group had to make sense out of 22 factors.

• **The Prudent Newsboy**—The kind of mathematics that might be necessary to do that can best be understood if you take the simple case of a newsboy. He buys papers for 2¢, sells them for 3¢, averages 10 customers a day. His sales may be more or less than 10 on



Are you *spreading* yourself all over the map?

You can spread yourself too thin if you try to mastermind the operations of *every* plant, *every* branch office, *every* department.

The boys down the line—from foremen to branch office managers—can relieve you of a lot of small and medium-sized decisions, leave you free for the *big* problems. They can, that is, *if* they have the facts.

Reliable, up-to-the-minute facts are always at hand *on the spot* when you let modern, flexible McBee Keysort keep your records straight.

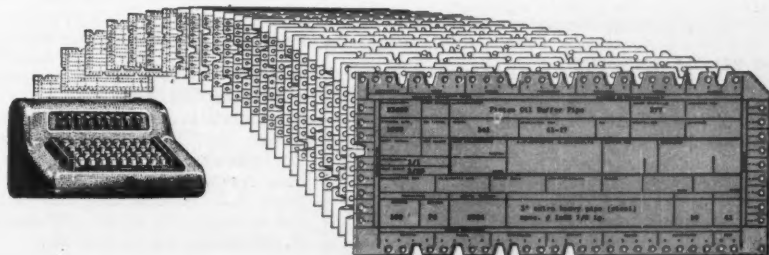
It doesn't cost much to set up a Keysort records system in each plant or branch. Doesn't take highly trained specialists to operate it, either. Run-of-the-water-cooler office help can handle Keysort along with their regular duties.

Keysort's adaptability enables you to parcel out the paperwork of payrolls, cost accounting, inventory and the rest, spares the central office and speeds every procedure.

With present personnel, *without* costly installations, McBee Keysort cards and machines provide accurate and useful management controls at less cost than any other system. When notched, the pre-coded holes along the edges of each Keysort card make it easy to *collect* a wealth of data . . . *classify* it . . . *summarize* it . . . *file* it . . . *find* it . . . *use* it . . . *quickly and accurately*.

No wonder McBee sales have multiplied tenfold in a few short years.

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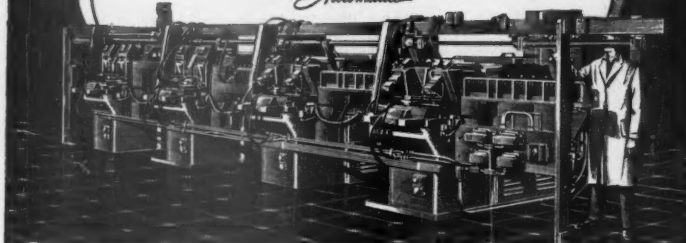
What names come to mind
when you think of
progressive manufacturing?

MOST of the ones you think of first have bought New Britain Automatics within the past few years for new and better ways of doing important metalworking jobs. The New Britain-Gridley Machine Division, The New Britain Machine Company, New Britain, Conn.

AUTOMATIC BAR AND CHUCKING MACHINES • PRECISION BORING MACHINES
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NEW BRITAIN

Automatics



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The M. & St. L., a modern, Diesel-powered Railway, is dedicated to constant improvement of that service.

Flagships of the M. & St. L. fleet are Daily Through Freight Trains, between Minneapolis, headquarters of the road for 80 years, and Peoria, its eastern terminus. No. 19, westbound, and No. 20, eastbound, make the 476-mile run in less than 18 hours, including four stops, at Albert Lea, Marshalltown, Oskaloosa and Monmouth.

These "hot shots," powered by big three-unit Diesel-electric locomotives, speed freight through

THE PEORIA GATEWAY

Routeings over the M. & St. L. via Peoria save hours and even days on transcontinental "bridge line" traffic and on shipments, both east and west, between the Minneapolis-St. Paul territory and points throughout the East and South.

The Minneapolis & St. Louis Railway

Traffic Offices in 36 Key Cities



"... 'the biggest job is to interest administrators in the mathematics of differentials and prediction' ..."

MANAGEMENT starts on p. 62

any one day. His problem: How many papers to buy in order to minimize his losses? The answer: nine papers.

In the Morse-Kimball book, these are the formulas that were worked out to help the newsboy solve his problem:

$$E_k = \sum_{m=0}^k (3m - 2k) \frac{10^m e^{-10}}{m!} + \sum_{m=k+1}^{\infty} k \frac{10^m e^{-10}}{m!}$$

It is easily seen that

$$E_{k+1} - E_k = \sum_{m=0}^k (-2) \frac{10^m e^{-10}}{m!} + \sum_{m=k+1}^{\infty} \frac{10^m e^{-10}}{m!}$$

But, since

$$\sum_{m=0}^{\infty} \frac{10^m e^{-10}}{m!} = 1,$$

this may be written

$$E_{k+1} - E_k = 1 - 3 \sum_{m=0}^k \frac{10^m e^{-10}}{m!}$$

Kimball, who is now a chemist on the Columbia University staff, thinks this kind of mathematics can be used in industry's problems of production, transportation, or warehousing.

There are other problems OR men would like to tackle; probably their most important attribute is the scientist's urge to try anything.

Some of the operations research methods already are encroaching on old, established business practices. Take scientific sampling, which has been used a lot since the end of the war in quality control, using the theory of probabilities instead of 100% inspection.

Now there's talk that 100% auditing may go the same way as 100% product inspection. A big insurance company thinks it can use a sampling method to check its figures. That would replace to-the-last-penny accountancy. The time and labor saving obviously would be huge. So far the plan is stymied by tradition: The insurance company must sell the idea to accountants, lawyers, and financial men.

The same idea could be applied to paying salesmen. If 100 salesmen write an average of 200 orders a month, computation of commissions on each order can be a costly affair. By scientific sampling, only one out of 10 orders would need checking.

Aside from specific applications, though, the OR men's biggest problem right now, according to Bronawski's book review, is the "immense educational task of interesting economists and administrators in the mathematics of differentials and of prediction."

REVOLUTIONIZES CONSTRUCTION FASTENING!



NEW

REMINGTON

MODEL 450

STUD DRIVER

Cartridge-powered tool fastens steel or wood to concrete or steel in seconds . . . no outside power source

Exhaustive tests prove the new cartridge-powered Remington Stud Driver to be the finest, speediest fastening system ever devised . . . easily sets as high as 5 studs per minute. No other equipment needed. Speeds work and cuts costs. The Model 450 Remington Stud Driver is made by Remington Arms Company, Inc., America's oldest and foremost sporting arms manufacturer. For detailed information and the name of your nearest distributor, fill out and mail the coupon below. There may be slight initial delays in delivery until production and distribution catch up with demand.

"If It's Remington—It's Right!"

Remington



MAIL THIS COUPON TODAY FOR FURTHER INFORMATION

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I am interested in obtaining detailed information on the Model 450 Remington Stud Driver.

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LOOK AT THESE EXCEPTIONAL FEATURES

COMPACT AND PORTABLE—Weighs only 5½ pounds, ideal for scaffold, ladder, overhead work, inaccessible places. Comfortable to use in any position.

SPEED—One man can set up to 5 studs per minute, as much as 100 times faster than other methods. Sets stud at whatever depth is required up to 2¼ inches, depending on material.

ELIMINATES INVESTMENT IN OUTSIDE POWER—Self-powered. Especially useful in isolated places.

TRIPLE SAFE—Plainly visible red dot indicator shows when it's cocked; safety must be depressed before and during squeezing of main trigger; permanently attached safety shield must be compressed against work before Stud Driver will op-

erate. Trigger can't be accidentally tripped. Slight recoil. Low noise level.

WIDE VARIETY OF STUDS are available for every fastening job. Genuine Remington studs are trademarked for user's protection. Pull-out resistance as high as two tons in good concrete, depending on stud used. Cartridges are available in 5 power loads covering practically all fastening needs.

UNIQUE, FAST ASSEMBLY OF STUD AND CARTRIDGE—Tough plastic heel cap permits lightning assembly of any cartridge with any Remington stud, identifies power load, protects head and thread of driven stud.

PRICE for Model 450 Remington Stud Driver complete in rugged steel carrying case—only \$119.50.

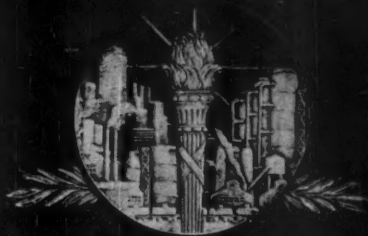
Speeds all these jobs . . . and many more

1. Hanging steel sash and door buck to concrete and brick.
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5. Attaching conduit and panel boxes to steel and masonry.
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AN AWARD
FOR
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ACHIEVEMENT
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PHILLIPS PETROLEUM COMPANY

IN RECOGNITION OF ITS MERITORIOUS
CONTRIBUTION TO THE ADVANCE OF THE
INDUSTRY AND PROFESSION, MADE POSSIBLE
THROUGH A BROADER PARTICIPATION BY THE
CHEMICAL ENGINEER IN THE AFFAIRS OF
THE PROCESS INDUSTRIES

PRESENTED BY
CHEMICAL ENGINEERING
NOVEMBER 23, 1951



PHILLIPS

distinguished service...

PHILLIPS PETROLEUM COMPANY is proud to receive the 1951 Chemical Engineering Achievement Award for having:—

"... contributed most to the advance of chemical engineering in industry..."

Seventy of the nation's leading chemical engineering authorities independently voted this honor to Phillips for a two-fold achievement: First, Phillips development of high abrasion carbon black; second, Phillips major contribution to the success of cold synthetic rubber. Together these advances make possible automobile tires that wear thousands of miles longer than the finest tires ever made before.

Credit for this success goes to those who make chemical dreams come true in our laboratories and plants. Over 2,000 of our nearly 20,000 employees are scientists and engineers. From their diversified efforts come achievements without number across the whole broad field of petroleum chemistry.

We work vigorously with nitrogen fertilizers, atomic energy, sulfur compounds, synthetic fiber materials and many organic chemicals. And, of course, we are in our third decade as large producers, refiners and marketers of fuels and lubricants.

Previously this award has recognized such great endeavors as the Atomic Bomb Project and the wartime Synthetic Rubber Industry.

It is a privilege for us to be honored with these groups and with the other important chemical companies which have also earned this high distinction for chemical engineering accomplishments.



WHAT THIS ACHIEVEMENT MEANS TO YOU

For every 9,000 miles you drive your car, the average wear is about $\frac{1}{8}$ th of an inch from the tread of natural rubber tires made with ordinary carbon black.

Now, with tires made with *Philblack O** high abrasion carbon black and cold rubber, the same $\frac{1}{8}$ th inch of tread wear will give you 12,000 . . . 13,000 . . . even 14,000 miles of good, safe service.

*A Trademark



PETROLEUM COMPANY

Phillips Chemical Company, a subsidiary
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For your information in developing 1952 sales quotas, Midwest Unit Farm Papers have made a survey...

of Things to Come, Selling to be Done

In the survey just completed by Midwest Unit Farm Papers, farmers of the Midwest 8 states specify some 240 products and services they plan to buy in 1952, and in what quantities.

When you see what their "Buying Intentions" are, it's a foregone conclusion that you will want to revise your "selling intentions"—upward! The potential for practically everything farmers can use... from dairy barn insulation to built-in kitchen fans—is terrific.

As a unit, the 1,276,107 subscribers of Midwest Unit Farm Papers comprise the richest farm market in the world. To sell them, buy the Unit—one order, one plate at a substantial savings in rates.

MIDWEST *Farm Paper* UNIT

The Farmer (Minnesota and the Dakotas)
Wallaces' Farmer and Iowa Homestead
Wisconsin Agriculturist and Farmer
Nebraska Farmer
Prairie Farmer (Illinois and Indiana)

CALL YOUR LOCAL MIDWEST REPRESENTATIVE

MIDWEST OFFICES AT:

250 Park Avenue, New York... 50 East Madison Street, Chicago... 542 New Center Building, Detroit... Russ Building, San Francisco... 1324 Wilshire Boulevard, Los Angeles.



NEW BOSS welcomes, soothes jittery employees after Armco Steel bought a quarry. Outing for 110 helped make it a...

Happy Transfer

When a big company buys up a small one, it often finds that a personnel problem is one of the liabilities it is taking over. That's true even if the purchased company has had good labor relations. A change of boss can breed jitters in the workers.

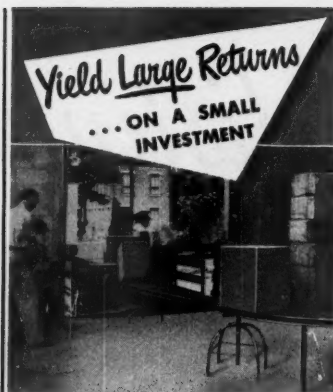
Armco Steel Corp. has been expanding rapidly since the war; it thinks it has the personnel transfer problem licked. Armco's latest purchase is a good example of how to make a smooth shift of ownership.

• **Purchase**—To nail down a supply of limestone for its expanding blast furnace capacity, Armco bought Ohio Marble Co. and Piqua Quarries, Inc., two companies with the same management. Armco had been buying 400,000 tons of limestone a year from the Piqua combine, 60 miles from Armco headquarters in Middletown, Ohio.

The quarry operation was an old company with a family atmosphere. To preserve that, Armco worked out a way to make sure that the Piqua workers wouldn't feel lost among the company's 30,000 other workers.

Before the sale was publicly announced, three Armco vice-presidents went to Piqua to assure the 110 workers of their security.

A little later, Armco loaded its new employees in buses, drove them to Middletown. There, they met top management, toured the steel plant, had lunch. Also, they heard a pep talk by Armco president W. W. Sebald, who handed Armco veteran pins to 21 of the visitors, each of whom had been with the limestone company 25 years or more.



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A PRECISION HUMIDITY AND TEMPERATURE INDICATOR

This precision, hair-operated indicator is manufactured and calibrated to professional standards by the maker of the world's finest weather instruments. Handsome, modern case for desk or wall mounting with instant-reading dial. Your trademark on the case on orders of over \$50. A distinguished gift for only... **\$18**

Special discounts on quantity orders.

Order direct from

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BUSINESS WEEK • Dec. 1, 1951

MANAGEMENT BRIEFS

Stock options: Seventeen big companies out of 150 surveyed by American Institute of Management offer restricted stock options—eligible for treatment as capital gains under the tax law—to all employees. Most companies confine this scheme of incentive pay to key executives or middle management. Only a few go much further down the line: Sears, Roebuck tops these, making 40,000 employees eligible.

Does profit-sharing pay? Lucas S. Miel, president of Commercial Steel Treating Corp. (Detroit), thinks so. Since 1947 when profit-sharing was installed, he says, his company's productivity (measured by sales against labor-hours) has risen 3.37% to 6.23% a year.

Schenley Industries, Inc., has paid out \$176,509 to employees in the armed forces since a military service benefit plan was started last spring. Inducted personnel totaled 245 and received \$720 on the average up to Sept. 1. Most of them get full pay the first three months in uniform, a quarter of their pay each month thereafter, for as long as they are in uniform.

Advertising pay: The average industrial advertising manager gets \$9,318 a year, according to a survey by Industrial Marketing magazine. That's 126%, or \$5,180, more per year than he got in 1940.

Parking station operators have formed an association, "the last major industry to do so," says president B. M. Stanton. The group calls itself the National Parking Association (NPA), no relation to the Washington agency. Membership totals 25, with a potential of 9,000.

Old-age counseling for retiring employees has been installed by Lockheed Aircraft Corp. Ray H. Griest, a retired executive, heads the program. Later he'll get a financial expert and physician as aides. The plan was put together by Karl Kunze, Lockheed psychologist.

Executive health programs in the San Francisco area break down like this: In a large sampling, 50% of the companies give an employment physical; only 40% give examinations after that; 20% give health tests to all management; 30% say their top executives' examinations are more rigid than for other levels. Only about a quarter of the companies make periodic tests mandatory.

how to keep
your dealers'
names at your
customers'
finger tips



Question: How can you make sure prospects will find your dealers?

Answer: By the use of Trade Mark Service in the 'yellow pages' of the telephone directory.

National Trade Mark Service localizes national advertising. Your trade-mark or brand name is prominently displayed in the 'yellow pages' over a list of your local dealers, their addresses and telephone numbers.

When you use Trade Mark Service, you reach the 9 out of 10 shoppers who depend on the 'yellow pages' for buying information. It helps cut down substitution . . . build business for your dealers.

To see this ideal dealer identification plan in operation, look through your local telephone directory, under "Automobile Dealers," for example.



FOR FURTHER INFORMATION, CALL YOUR LOCAL TELEPHONE BUSINESS OFFICE OR SEE THE LATEST ISSUE OF STANDARD RATE AND DATA.



NAMES & FACES



DETROIT EDISON'S WALKER CISLER:

A Rather Improbable Exec

The man who sat down behind the president's desk at Detroit Edison Co. this week, Walker L. Cisler, is a rather improbable top executive. In fact, if his existence didn't refute the claim, you might even say that he was impossible.

As a man he's mild, reticent, generally undramatic, and has practically no private life. He doesn't even play golf. But as an executive, he's an executive's executive of the highest level. He works close to 24 hours a day, at least six days a week, as one of the top seers, cosmic planners, coordinators, and improvisors in industry and government.

• **Dynamo in Mufti**—All Cisler's imagination and personality seem to be wrapped up in his business life. When he talks, he's restrained, hesitant, almost emotionless. His friends and associates all speak of him in glowing terms as "a guy who will do anything for you, but without your knowing he's done it." In Washington during the war, when

hotel rooms were as tight as steel, he would sometimes give up his own room to some visiting utility man and sleep elsewhere, often without the man's knowledge.

He also crossed plenty of official channels and cut through a lot of red tape during his wartime stretch with the Office of War Utilities and the Army, and a good many toes were stepped on in the process. But he doesn't seem to have an enemy in the world.

• **High-Stepping Saint**—When Cisler is operating, he is resourceful, quick, and efficient. The reason he gets by without creating bad feelings seems to be that he doesn't appear dynamic and high-powered. He may act as a dictator but he maintains his reserved, gentle, private personality so no one feels "pushed around."

"You might call Walker Cisler a kind of naive saint," an associate summed it up, "except that he runs too

fast for a saint." If Cisler seems naive, it's only because he has refused to acknowledge channels, red tape, even authority, when they have been in his way.

• **Walks Softly**—Once Cisler gets firmly set in the Edison saddle, he is going to have a reorganization job on his hands in which his paradoxical personality may come in handy. Detroit Edison has always been a one-man, personal kind of operation. Alex Dow, who was with it from its beginnings, built the company around himself. Even after he died almost 10 years ago, the management continued to be a personal one. As Cisler puts it, "The industry and the company grew tremendously, but the internal organization needed to meet the new situations just never developed."

Cisler must now reorganize the management, create more middle-level managers, and delegate authority to them. He'll have to bring up men, bypass some with longer service, and generally shake the company.

That's a difficult thing to do in any outfit, but it's even tougher in the utility business, where seniority and tradition are hallowed. What's more, Cisler is an outsider—he was with Public Service Electric & Gas Co. of New Jersey from 1922 when he finished at Cornell to 1941 when he went to the government. Edison signed him on in 1943, but he didn't go to work there until after the war; so at least some people in the company are afraid that he won't respect their tradition.

Chances are he won't run into any trouble. If he operates true to form, he'll avoid any rash, sudden moves. He plans to move cautiously, pick his men, and gradually and painlessly move them into place. What's more, these moves won't look like a shakeup at all; they'll probably go almost unnoticed, because that's the way he operates, almost unnoticed.

• **Groundwork**—Until 1941 when Cisler came to Washington, nobody could have guessed that he'd wind up being what some utility men call the biggest man in the business. He came out of engineering school near the top of his class with keys from Tau Beta Pi and Phi Kappa Phi, the honor societies. He played football and ran track in school, but he wasn't sensational. He was just as happy being somebody else's pacesetter.

Then he joined the Public Service Electric & Gas Co. of New Jersey training program. From then on he pulled himself up from one operations job to another in the power-generation end of the business. He worked on



ANTIKNOCK COMPOUND

The improvement in gasoline made by the addition of antiknock fluid adds about sixteen cents to the value of today's gasoline dollar

Gasoline is sold by the gallon, but it is used by the mile. And on the basis of mileage, modern gasoline improved with antiknock fluid is a tremendous bargain.

Today's cars, with few exceptions, are heavier, more powerful and faster than their counterparts of twenty-five years ago. Yet, despite increases in weight and power, many modern cars actually deliver more miles per gallon. To put it another way, they give greatly improved "ton-mile" economy.

How antiknock fluid steps up mileage

One of the principal reasons for this improved economy is today's high octane number gasoline, which permits higher engine compression ratios and correspondingly higher engine efficiencies. The petroleum industry has made possible this greatly improved gasoline by developing advanced refining methods and through the addition of antiknock fluid.

The use of antiknock fluid has added an average of ten octane numbers to the gasoline normally found in service stations. If this antiknock fluid were not available, then automobile engines of the latest design would have to have their compression reduced about one ratio. Under these conditions the only way to restore acceleration and hill-climbing ability to present levels would be through a change in rear-axle ratio to increase engine speed. The end result of this change would be a loss of about 2.6 miles per gallon in cars which now average around 16 miles to the gallon—or a loss of about 16%.

Translated into dollars and cents, the improvement in gasoline antiknock quality contributed by antiknock fluid adds about 16¢ to the value of your gasoline dollar.

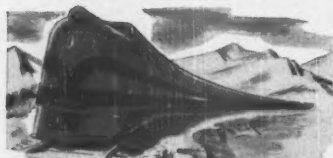
ETHYL CORPORATION, New York 17, N. Y.

Makers of "ETHYL" antiknock compound





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"... 'Cisler kind of personally swarmed all over the country' ..."

CISLER story begins on p. 72

various special committees doing planning and development, and finally in 1938 he became assistant chief engineer of the electric department. Even then it didn't look as though he'd ever be much more than just an upper-middle-level utility executive.

• **Off to the Pentagon**—But the war was coming, and with it was coming Cisler's first big chance to show his strange blend of low pressure and tremendous vision. When Julius Krug took over as head of Office of War Utilities, he needed a staff. So he asked the industry to send some of its bright people to Washington. One of those who came and was hired was Cisler. OWU's job was to see that utilities got what they needed to keep running and to expand with defense needs.

• **No Coordination**—One of the first things Cisler spotted was that expansion plans weren't coordinated with available equipment and material. Unless something was done, it looked as though a lot of plants would be almost finished, but not quite operating, instead of fewer plants 100% completed.

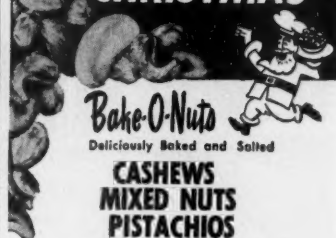
Another problem was the military. Navy and merchant ships also use turbines, and they are built in the same plants that make power-generating turbines. Soon after Cisler came to Washington, he went to a meeting and heard an admiral announce Navy and maritime needs and allocate them among manufacturers. When Cisler told him he had allocated more than all the available production capacity in the country and had left out power needs completely, the admiral told Cisler, "Any blacksmith shop can build land turbines—make them out of porcelain if you can't get anything else."

"Then," says Cisler, "we knew what we were up against."

• **Manning the Guns**—First thing he did was go out and get himself a staff that could "cajole and coerce utilities and manufacturers into doing what he wanted them to do." As an OWU associate put it, "Cisler kind of personally swarmed all over the country by plane and phone, talking utility people into parting with their best young brains—and liking it, too, probably."

Then Cisler worked out a scheduling plan for the equipment manufacturers that allocated their facilities between land and sea turbines on a realistic basis in terms of what was and would be available in the way of capacity, materials, and equipment. It eliminated

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NEBRASKA RESOURCES DIVISION
STATE CAPITOL LINCOLN



... A kind of naive saint.

custom jobs and "gold-plating" and called for standard units.

• **It Wasn't Legal**—There was only one trouble with this master schedule—neither Cisler nor Krug nor OWU had any power to put it into operation. They couldn't force anyone to do anything. They could only ask for co-operation. So Cisler wrote a letter telling the manufacturers what they should or could produce in what time.

The letter looked like an order; no one was sure at the time whether it was or not, and if it was, then it was illegal. But Krug signed it after OWU's counsel, Herbert Marks, winced and winked at it.

It was a very ticklish situation. Any manufacturer who knew OWU's powers could have told them to fly a kite. But nobody did—either because they really thought they were being ordered or because they realized it was the only solution to the mess.

• **Intelligent Collusion**—It was what somebody called "intelligent collusion," and it was the way Cisler got a lot of other things done, too. Once the war broke out, OWU and Cisler got the power to do their scheduling legitimately. And Cisler kept on planning, promoting, and improvising. As one of his friends said, "Cisler had his fingers in everything electrical in this country at the time, and nobody minded. He was a busybody, but a constructive one, and whatever he touched—whether he was supposed to or not—turned out better for his tampering."

• **He Knew the Boys**—One advantage Cisler had in his work was that he knew a lot of people in the business personally. He's been around for a long time and has kept up contact with Cornell engineering alumni as well as people in Edison Electric Institute. Therefore, a lot of his dealings were on a personal level with old friends.

But when he went to Europe, he was

Portugal harnesses flood waters for power, irrigation



Flood control, irrigation and electrical power—vital needs in southern Portugal—will be provided by the Barragem de Campilhas, an earth-fill dam now being built in Province Alentejo for the Direcção Geral dos Serviços Hidráulicos.

Societe Coloniale de Construction, S.A., "SOCOL" of Lisbon, worldwide contractors handling all 981,000 cu. yds. of earth involved, reports their most effective earthmoving machines have been 3 electric-control C Tournapulls (scraper capacity, 13.5 yds.; speeds to 35 m.p.h.).

Moving heavy, wet loam and clay, the 2 units load, haul and spread 108 to 120 cu. yds. per hour on 5600-ft. cycles. They maintain high speeds despite heavy rains, steep grades, and restricted dump areas.

Have 6 LeTourneau units in Belgian Congo

Another division of this famous company, SOCOL of Belgian Congo, reported similar outstanding results

with their 3 C Tournapulls and 3 Tournadozers (rubber-tired Bulldozers with speed range to 19 m.p.h.). These were used recently to complete the first highway built under private contract in Belgian Congo—186 miles of all-weather road between Luputa and Kabinda. Both this African highway and the dam in Portugal will be in public use more quickly and with materially lower cost than would have been possible with manual or any other mechanical method of construction.

J. E. Villars, SOCOL director, reports that under difficulties, "Tournapulls have outperformed and out-produced all similar equipment."

It will pay you to learn how these fast, modern, rubber-tired Tournapulls and Tournadozers can speed up production and lower costs on your proposed excavating projects.

To get in touch with LeTourneau equipped contractors, call your LeTourneau Distributor or write directly to us outlining your requirements in yardage, haul length, etc.

Loaded Tournapull speeds up 6% grade to fill area — makes complete 5600-ft. cycle of load, haul, and spread every 8 minutes.



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"... he is a pushover for any kind of work he thinks is worth-while ..."

CISLER story begins on p. 72

dealing with a continent of strangers. Actually, Cislser didn't want to go to Europe in 1943. He had figured that he had done his job in Washington, and he was all set to go to Detroit and start on his new job. But Secretary of War Stimson asked him to delay his return for three months and go to North Africa as an Army officer to see what could be done about rebuilding power facilities there.

• **Pushover**—Cislser admits frankly that he is a pushover for any kind of work he thinks is worth-while, so he joined the Army for what he thought was three months. He prepared his reconstruction plan and started home. But when he got back to Washington, he was asked to go back over. Again he gave in and went to England.

His job was to get European utilities back in operation. But the Army meant utilities for the Army—Cislser took it to mean utilities for the Europeans, which meant every utility he could lay his hands on. He somehow felt responsible for everybody in Europe who didn't have power and light.

• **Cislser's Private Army**—With the help of people back in Washington he built himself a private army of utility men gleaned from every kind of military outfit all over the world. They had their own private lines of communication back to Washington. Air ferry pilots carried messages and brought liquor, people, or anything else they needed. Cislser somehow felt that the Army might not approve of a lot of the extra projects he might want to take on to restore power to Europe. Everybody complained that Cislser was going outside of channels, and he admits that he was. He almost never was inside them.

• **Lights for Paris**—After D-Day his men moved into towns almost as soon as the first troops did, and they went to work immediately restoring the utilities. But the most dramatic feat of all was Paris. Cislser knew through underground contacts that there wouldn't be any fuel for power by the time the Germans moved out. So he dreamed up a fabulous scheme for running power up from hydro installations in the south of France that were in the hands of the resistance forces. There was a transmission line connecting the hydro plants to Paris, but it had been pretty badly chewed up. Cislser's plan was to repair the line as portions of it were liberated.

He organized fast-moving repair teams. Then he had Air Force planes fly reconnaissance over the line to find



Photo by Herbling

"The hopes and fears of all the years..."

Who can fail to respond to the wonder and magic of Christmas . . . to its messages of kindness and friendship . . . to its promise of hopes fulfilled and fears dispelled?

The Christmas spirit and the work of science can go hand in hand to help in many ways to fulfill long-held hopes and dispel age-old fears.

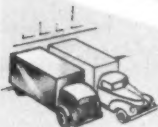
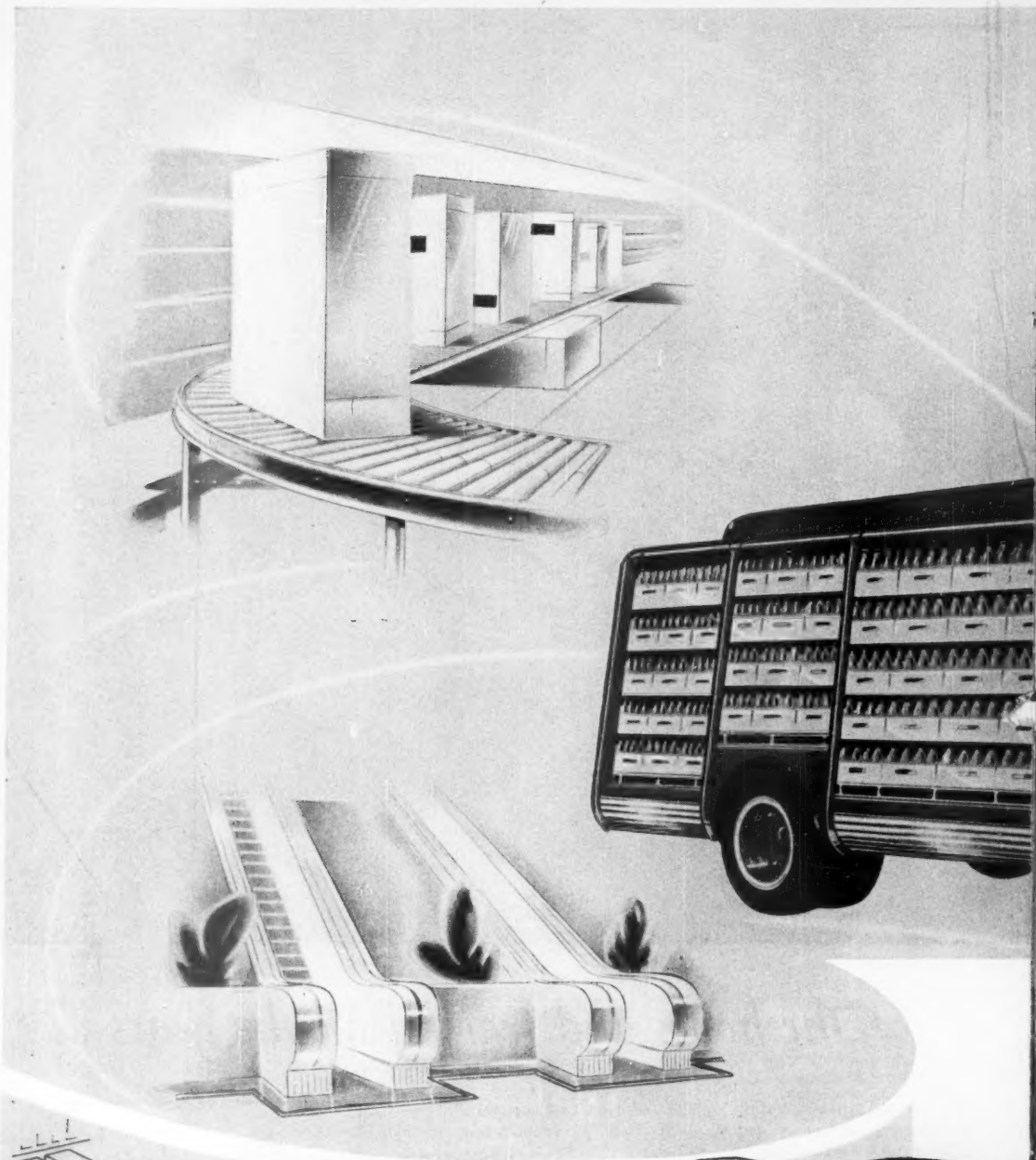
Almost every day we read of advances in the treatment of disease and the relief of suffering. New ways are being found to grow more food and make other good things available to more people throughout the world. Through scientific means the earth's heaven-given abundance is being released in numerous ways for the benefit of mankind.

America's great chemical industry serves millions of people through scores of other industries. It is grateful for the role it is able to play in transforming the discoveries of science into human benefits.



AMERICAN Cyanamid COMPANY

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SAVES SPACE at the loading dock, in traffic, parking and in the garage.

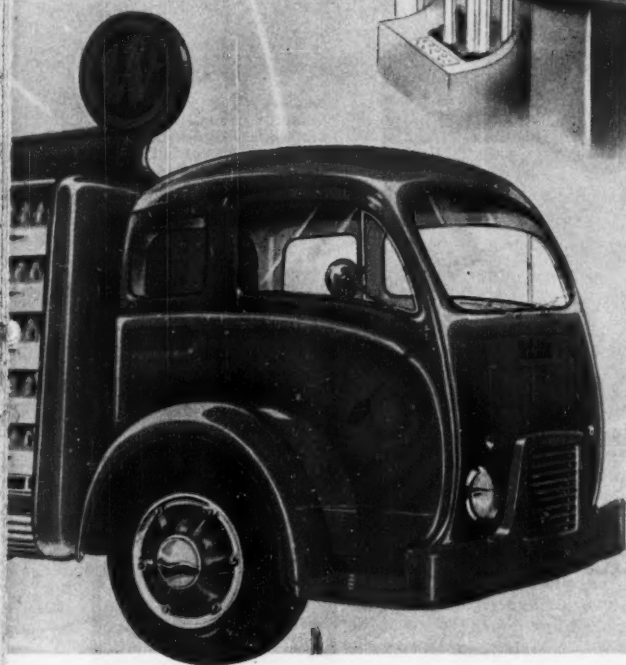
SHORTER turning radius for better maneuvering, and substantial savings in driving time.



DROP FRAME design lowers loading height, saves reaching, saves driver energy.

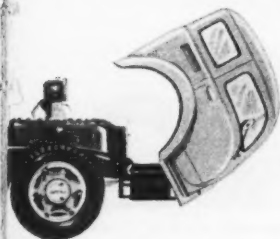


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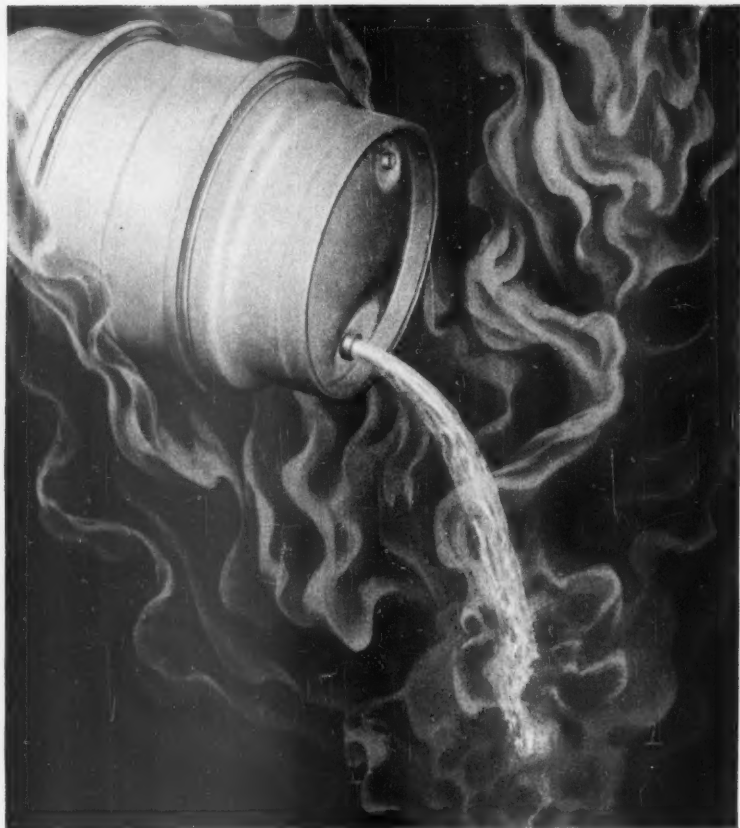
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proved that this "successor to the motor truck for city deliveries" saves time and dollars. See your local White Representative for a demonstration.

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How to control a liquid inferno

THIS violent fuming nitric acid would soon ruin containers made of most materials—but not aluminum!

For aluminum is highly resistant to corrosive attack—a major reason why it is the best metal to use in contact with a wide variety of chemicals.

This resistance to chemical attack, together with aluminum's other *unique combination of advantages*—such as lightness, strength, economy, heat and electrical conductivity—explains why more and more aluminum is required for today's military

and civilian uses. To meet this need, Kaiser Aluminum is expanding facilities, will soon increase its production 80%.

All of the applications shown here are examples of aluminum's corrosion resistance. Kaiser Aluminum engineers are eager to show manufacturers how this, and other advantages of aluminum in combination, can improve many products and reduce costs.

64 sales offices and warehouse distributors in principal cities. Kaiser Aluminum & Chemical Corporation, Oakland 12, Calif.

Kaiser Aluminum

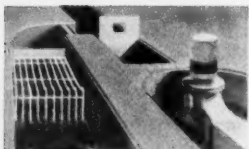
A major producer in a growing industry



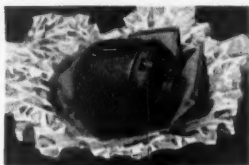
Aluminum tops of oil storage tanks resist corrosive brine and sulphur content as well as sulphide bearing gases. High reflectivity of aluminum reduces heat evaporation.



Aluminum is used for tank trucks because it strongly resists attacks of many chemicals, at the same time makes possible bigger payload due to its lightness.



Sewage disposal plants employ aluminum equipment such as grit chamber wires and sluice gates to withstand the severe corrosive conditions. Aluminum stands up for years with minimum maintenance.



Aluminum foil prevents the start of corrosive action on today's vital machinery and machine parts. It forms a protective package that's non-porous, vapor-tight, moisture-proof.



Aluminum caps are used to resist the corrosive action of many bottled goods, such as bleaches. Cap can't rust or stick. Light weight of aluminum means more caps per pound, lower cost.

"... a briefcase full of cigarettes and technical journals ..."

CISLER story begins on p. 72

out where it was damaged. Whenever a section of the line fell into Allied hands, a team would move in and fix it. The first Allied troops arrived in Paris toward the end of August, 1944. By Sept. 6 Cisler's power was flowing into the city.

• **And Europe**—From then on, Cisler moved all over Europe helping utility men get their plants in operation again. But they weren't his old buddies, who would build plants and fight wars because he wanted them to. They were strangers with different methods of operating, and he couldn't even speak their language. So he used a different approach. Wherever he went, he carried a briefcase full of American cigarettes and technical power journals. First thing he'd do when he met a utility man was give him cigarettes and a chance to find out what had been happening in his industry. Then Cisler would outline his ideas and improvisations for getting their plants back on their feet. It usually worked.

• **Drafted to ECA**—That's why Paul Hoffman picked him to head ECA's power program. Cisler didn't want to do it. He had already become Edison's executive vice-president, and he didn't think he had the time. But again he gave in to what he figured was his duty. And to make sure that he didn't do too much outside work on company time, he used his vacations to take the necessary trips to Europe. What's more, he has occasionally even put in a full day's work at the office before flying to Washington for a meeting.

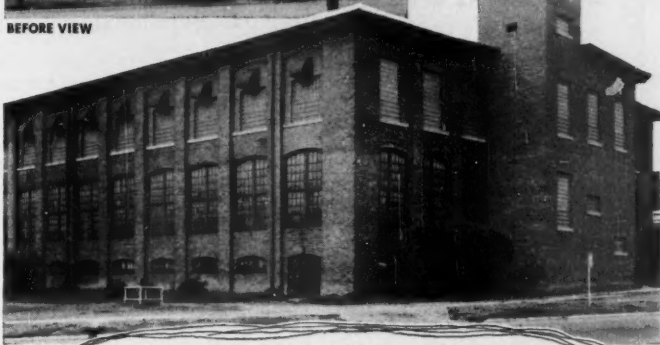
• **All in the Day's Work**—Cisler has one advantage over most people—he needs hardly any sleep. A 10-minute nap when he is exhausted will put him in shape again, and on a train or plane he can get enough sleep to carry him for days.

With all the accomplishments and glory that Cisler has piled up—he has a string of medals including the French Legion of Honor—he's probably one of the most modest men in America. When pressed, he may talk about the things he has done, but he somehow doesn't even seem to be aware of them as anything more than just jobs. He feels deeply about the good that ECA, for instance, has done, and the Greek power program is his own pet project, but it's all little more than duty to him. It's almost as though he were trying to lose his private life completely in work and public service, and he seems to be succeeding.



BEFORE VIEW

THESE "before" and "after" photographs of the Rosemary Manufacturing Company, Rossmore Rapids, N. C., show how large areas of outworn window sash were replaced with modern PC Functional Glass Blocks. Here, they admit abundant, scientifically-directed daylighting. Partial replacement, made possible by PC Glass Blocks, meets budget limitations.



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Complete sash replacement can be done at one time, or the program can be extended over long periods, when PC Glass Blocks are utilized. Whether your budget is large or small, that's an important consideration in replacing worn window sash. And PC Glass Blocks offer you real money-savings. They seldom require repairs or replacements. No metal or wood sash is involved, to rust, corrode, rot or decay. There's no periodic and expensive painting and puttying. They cut maintenance costs. And, because they have more than twice the insulating value of ordinary single-glazed windows, heating and air-conditioning costs are reduced. Why not consult with our specialists regarding your particular sash replacement needs? Meanwhile, send for our free booklet.

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TAXES

Make Your Boy a Partner . . .

... and maybe you can save some taxes. Here are the groundrules of the liberalized tax law on family partnerships. Benefits start with the current year.

The Revenue Act of 1951 bulldozed new avenues of tax-saving by means of a family partnership. In a lot of cases the family partnership now becomes clearly preferable to the closely held corporation, from a tax standpoint.

Introduction of income-splitting in joint returns has made husband-wife partnership unnecessary since 1948. But until the 1951 law passed, there was real risk in creating partnerships with children as a device to transfer income from the parents' high brackets to the children's low brackets of tax. The risk: Tax courts and the Bureau of Internal Revenue often refused to recognize these partnerships for tax purposes.

• **Why?**—Most likely to draw BIR's fire were partnerships where the partnership interest—or the money to buy the interest—was a gift, and the new partner did no vital work for the firm.

It didn't matter to BIR and the courts that such partnerships were recognized under laws of the states in which they were organized. BIR generally ruled they were tax-cutting devices, not honest-to-goodness partnerships.

On the other hand, income from property has traditionally been taxable against the owner of the property—regardless of whether he bought it or acquired it by gift. So a father could give corporate stock or real estate to his son, and the dividends or rental profit would be taxable to the son.

The new law on partnerships essentially is an extension of this principle. In the 1951 Revenue Act, Congress instructed BIR to recognize a partnership interest where capital is a material income-producing factor.

I. Who's a Partner?

Under the 1951 law, a partner is recognized for tax purposes if he owns a capital interest in a partnership in which capital produces income to a major degree. It's immaterial how he acquired the partnership. And it doesn't matter if he performs services for the partnership or not.

As long as the new partner is legally competent, it doesn't even matter how young he is. A two-year-old is just as eligible as a grown man.

• **How It Saves**—There's a sizable saving in shifting income from high tax

brackets to lower brackets. For example:

Mr. A, a married man with one child, owns a sole proprietorship that yields an income of \$50,000 after exemptions and deductions. Even with income-splitting, the top \$6,000 is taxable at 60%, the next \$4,000 at 57%, and so on. Mr. A changes the business to a partnership and gives his son an interest that transfers \$10,000 of business income to the son.

For tax purposes, the \$10,000 now shrinks to \$8,400—the son is entitled to his own \$600 exemption and at least a \$1,000 standard deduction. And the amount is subject to taxes ranging from 20.4% on the first \$2,000 to 35% on the last \$400. True, the father loses an exemption because his son's income is more than \$600. But that loss is more than offset by the tax reduction on the \$10,000 that was shifted.

• **Exception**—The new law doesn't recognize partnership interests created by gifts where capital is not a material factor in producing income. Thus, an interest in a personal-service partnership, such as an accounting firm, cannot be created by a mere gift. The donee would have to participate actively in the firm for his interest to be recognized by BIR.

II. What's a Genuine Gift?

The new law on family partnerships applies only to transfers of partnership interests between a person and his spouse, ancestors, lineal descendants, or trusts set up for their benefit.

Although the new law requires that gifts of family partnership interests be respected, BIR can still raise questions: Is it a genuine gift? Has the donee become the true owner of the interest?

It helps if any shift in title by gift within the family is arranged so the following points can be proved:

• That you are legally (mentally) competent to make the gift.

• That the donee is legally competent to accept the gift. There's no age qualification—even an infant might qualify if he could satisfy the legal competence requirement.

• That you make an absolute transfer of title and control.

• That the donee accepts the gift.

The fact that a transfer was made to

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Trans-Vision looks inside new Universal Coffee-matic by Lunders, Frary & Clark. Trans-Vision is a product of Milprint, Inc., Milwaukee 1, Wisc.

Celanese*Acetate Transparent Film sells a product from the inside out

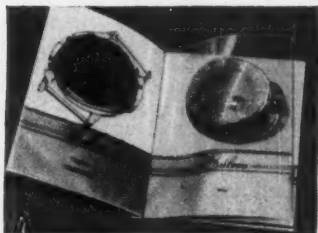
Celanese acetate is the perfect vehicle for printed presentations such as this . . . Trans-Vision is a wonderful way to put a product across . . . explain the fine details of its construction . . . demonstrate its superior design and excellent workmanship.

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parent film that depends on acetate's crystal transparency, perfect surface, flatness, resistance to wrinkling and cockling, dimensional stability, and non-aging characteristics—qualities that recommend Celanese acetate for packaging and other applications.

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Trans-Vision used as training aid of Bulova School of Watch Making for disabled veterans.

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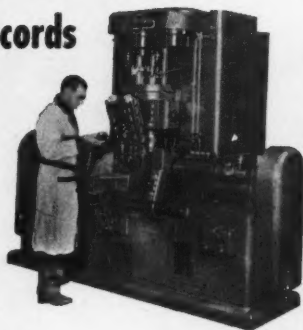
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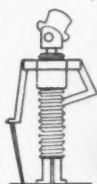
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You do not have to be in the pipe fittings or conduit business to appreciate the advantages of a tapping machine which will thread and chamfer two ells simultaneously in 4.8 seconds . . . or do the same for two tees in a matter of seconds. Cleveland engineers build machines to save production time which should interest you if your plant operations include tapping, or threading. Let us have your problem . . . the chances are we will come up with a solution. We may be able to design a machine which will not only combine several operations but also tap groups of holes at one stroke. Check with Cleveland first.



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Precision hardened and ground lead screw • Heat treated alloy steel spindles for maximum strength • Shear pin protection • Positive coolant and lubricant supply under constant control of operator • Rigidly constructed to give years of service • Maximum safety for operator and machine.

THE CLEVELAND TAPPING MACHINE CO.
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CANTON 6, OHIO



save taxes doesn't invalidate the saving through the gift.

• **Sharing the Profits**—Ordinarily, partnership income can be split any way the partners decide, as far as BIR is concerned. But, in liberalizing the law about family partnerships, Congress feared an unreasonable shifting of income to those partners who perform no services. So the law restricts allocation among the members of a family partnership by these rules:

• The partner who made a gift of the partnership interest must take a "reasonable" compensation out of profits before any profits are distributed.

• The donee partner cannot receive a greater share of profits than the portion attributable to his capital.

These restrictions apply only whenever there is a gift of partnership interest—and any sale to a spouse, ancestors, or lineal descendants is tagged by law as a gift. A sale between brothers wouldn't be a gift, and the restrictions wouldn't apply.

III. How to Save the Most

Starting now, a man has two ways instead of one to set up his business at a tax-saving over sole proprietorship. Ownership by a corporation may reduce the tax bill by accumulating part of the earnings in the corporation. But the partnership arrangement usually shows an even lower tax bill in many brackets. And the more partners the better.

• **Can Change**—Thus, it may be advisable in some cases to dissolve a closely held corporation and to form a family partnership instead.

There may be another advantage in liquidating a corporation. The properties may have increased greatly in value since acquisition; the new partnership gets these assets at their new, higher value. This gives the new firm a chance to make higher annual deductions for depreciation.

The tax cost of the capital gain on dissolution of the corporation must be weighed against the advantages in reduced taxes in future years through the partnership setup. A special section of the tax law gives unusual treatment to corporate liquidations that are initiated and completed within a single month during 1951 or 1952. It defers the capital gains tax on increased value of properties other than cash and securities; the owner won't have to pay the tax until he subsequently sells.

Where a corporation has little cash and securities but a lot of other property, this provision is a big help. Little tax is paid upon liquidation of the corporation, and the properties can be transferred to the newly formed partnership. Here, however, the partnership doesn't get a higher depreciation basis for its properties.

Reduce warehousing costs

**TWA
COAST-TO-COAST**
4-engine all-cargo

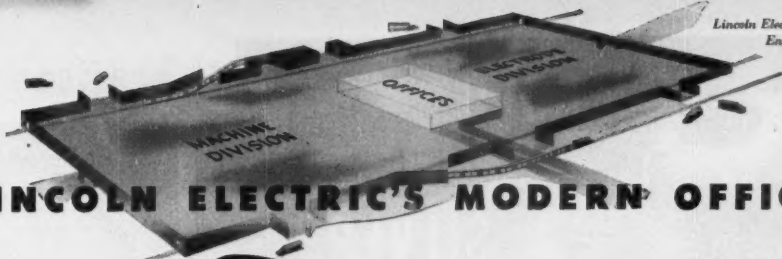
"Sky Merchant" service every night!*

Ship almost anything almost anywhere. Your best markets are only hours away. Call TWA today for rates, schedules, quick pick-up.

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*Except Saturday & Sunday
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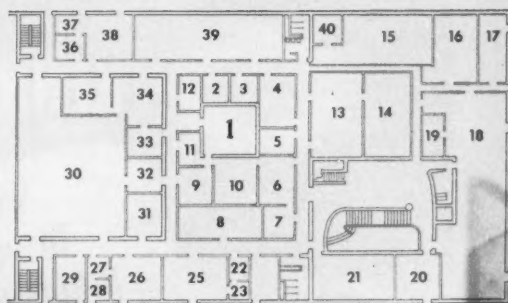
Lincoln Electric Company, Cleveland, Ohio
Engineers and Builders:
The Austin Company.

IN LINCOLN ELECTRIC'S MODERN OFFICES

Efficiency First

has been made lasting with

MILLS *Movable* WALLS



Office Layout



Lincoln Electric Company's new 20-acre plant is designed for maximum efficiency in every area, for office as well as production operations. All offices are located in the center of the factory building, with the president's office, No. 1 in floor plan and pictured at left, in the exact center of everything, surrounded by key personnel.

Future efficiency is assured by subdividing all office space with Mills Movable Metal Walls. As progress creates changes in space requirements Mills Walls can be moved to fit new layouts—in a matter of hours, with minimum labor, at very low cost and without interrupting normal routine.

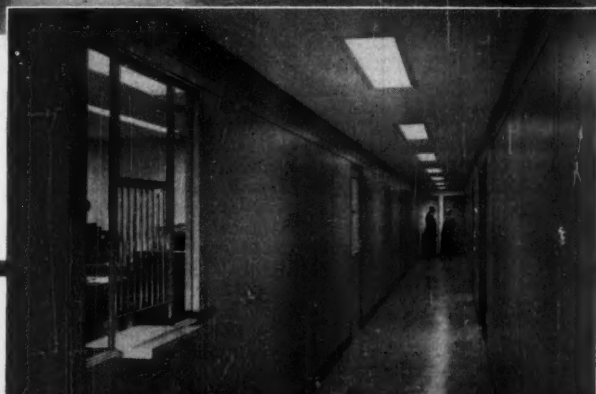
Mills Walls combine mobility with distinctively modern and attractive appearance. Insulated and sound-proofed, they require no maintenance but occasional washing to keep them looking fresh and bright.

★ ★ ★

Your office space can be made more efficient by mobilizing it, through flexible interiors formed by Mills Movable Metal Walls. For complete information on this modern, efficient way to subdivide interior space write for this easy-to-read, 48-page booklet, Mills Catalog No. 52.



THE MILLS COMPANY
972 Wayside Road • Cleveland 10, Ohio



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KENNAMETAL

*... worth MORE
to you than
precious metals*

THE real value of a metal is in what it can do—more than in what it can buy. Gold and silver were available for thousands of years before the development of modern metals and alloys—yet all the gold and silver in the world couldn't buy one automobile, refrigerator, or washing machine.

The development of modern metals—and tools to cut them—made practicable the manufacture of the conveniences you use everyday. Each advancement in metals and tools speeds production, enabling more people to own more of the necessities of life.

That's why the real value of Kennametal* is greater than that of precious metals. Manufacturers use Kennametal as a tool material to machine parts for products several times as fast as those parts could be machined with steel tools. One man and one Kennametal-tooled machine can now turn out three times as much as they could a few years ago.

Tools of Kennametal are equally efficient in mining, construction, quarrying; in rolling mills and in many other manufacturing processes. Pieces of Kennametal, used at the point in a machine where greatest wear occurs, stubbornly resist abrasion, corrosion, and heat—the machine performs faster, more accurately, much longer.

Kennametal, which helps to accelerate production of the appliances you depend on—enabling manufacturers to produce more of them, in less time, at less cost—is of far greater real value to you and to America than any precious metal.

* KENNAMETAL

... is a unique "cemented carbide"—much harder than the hardest tool steel—composed of pure crystals of different carbides that we refine straight from ores, oxides, and other raw materials. These crystals are so small that billions of them will fit into a thimble! Controlled quantities of these tiny elements are mixed with a "binder", formed into desired shapes under terrific pressure, then fused in heat so high it would destroy steel in seconds!

KENNAMETAL Inc.

Latrobe, Pa.

WORLD'S LARGEST Independent Manufacturer
Whose Facilities are Devoted Exclusively to Processing and Application of CEMENTED CARBIDES

READERS REPORT



Mrs. Durand, U. S. team, agrees that . . .

Horses Are Short of Cash

Sirs:

Thank you for the splendid story and photographs on the U.S. equestrian team [BW—Nov. 10 '51, p21].

There was one error that you may wish to make note of. The \$250,000 you mention as having already been "nearly" raised to finance the team to compete in the Olympics has not yet been raised. In the meantime, a group of sportsmen have financed the team and its training and competitions in order to establish and maintain an American equestrian team to represent this country abroad. The campaign for funds is, therefore, continuing throughout the country, as both the sportsmen involved and the team members think that it is an all-American effort in which the entire public should have a chance to participate. And if, by chance, the necessary funds are not raised to finance the traveling expenses, food for riders and horses, long months of training and maintenance, it will be the first time since equestrian events were held at the Olympics that the U. S. has not been represented by a team of jumpers and riders.

These sportsmen are particularly anxious that when the Olympics roll around next summer, on the very doorstep of Soviet Russia, in Helsinki, Finland, the U.S. is represented by its usual first-class equestrian team.

ALDEN CALKINS

NEW YORK CITY

• BUSINESS WEEK overstated the financial position of the U.S. Equestrian Team. Actually, at the time of the show \$89,000 had already been raised. During the show, \$61,000 more was added to the fund. That leaves \$100,000 to go, in order to get the

What happened to the mules?

Probably you remember what road building was like, back in the 1920's.

On a highway building job through terrain like this, dozens of teams of mules and gangs of men with picks and shovels did the grading. And instead of cutting straight through the hills, they wound their narrow crooked road through the valleys or over the crest.

Today a single big red tractor like this International TD-24, with 148 horsepower at the drawbar does the work of scores of men and mules.

The man and his machine build a far thicker, wider, tougher, longer-lasting highway. This means you get far more highway for your tax dollar, and in a lot less time.

International Industrial Power has helped this revolution of the science of earthmoving. If you want a good job of work done, call on the big red machines with the IH trade-mark.



ONE OF THE LEADERS in the new, progressive science of earthmoving is GUY F. ATKINSON COMPANY, shown here building a highway in southern California. Atkinson has 27 Big Red International TD-24 crawlers on his equipment roster, likes the "Big Red Champ" for its 148 maximum drawbar horsepower, fingertip control, 8 speeds forward and 8 reverse, and the ability to turn with power on both tracks.

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**INTERNATIONAL
HARVESTER**

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Lester B. Knight & Associates, Inc., offers an unusual combination of services to help business owners and management solve problems or improve operations for a more efficient, more profitable business. These services include business management, management counsel, plant design and layout, and architectural engineering.

The Knight policy on all assignments is to define the scope of the project clearly, get the facts, work out a satisfactory course of action with the client and present an agreed-upon solution in a concise, complete report. Each report is prepared as a guide in carrying out the recommended program—with or without our help as may be required—and includes the economics of the proposed changes compared with existing costs.

Knight Management Engineers, with from 10 to 25 or more years' experience in operating and consulting work, have assisted management with general business surveys, business organization, executive personnel, sales management, research and product development, personnel management, financial management and production engineering. Knight Plant and Architectural Engineers have supervised the design, construction and operation of many diversified plants including foundries, chemicals and fertilizers, gypsum, automotive parts, farm implements, machine tools, metal fabrication, railway specialties, glass, rubber, textiles, armor, munitions and forging.

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team to Helsinki. The chief role of the businessmen-sportsmen has been to solicit interest and spur along the campaign throughout the country.

Oklahoma!

Dear Suh:

Please suh, Texas already has its heroes Sam Houston and Davey Crockett; let Oklahoma have its Tom Slick [BW—Nov.17'51,p66]. You, with malice, libelously and fraudulently tell the readers that the King of the Wildcatters got his name in Texas. Cushing, let me tell you, is in Oklahoma—45 miles from Sapulpa, incidentally. And Tulsa is in Oklahoma—14 miles from Sapulpa, incidentally. And if I remember correctly Slick wildcatted the Glenpool—5 miles from Sapulpa, incidentally.

I know that many's the time I have gamboled among the jack pumps and rigs around Slick, Oklahoma—32 miles from Sapulpa, incidentally. Not only was Slick the home ground of Tom Slick, King of the Wildcatters, but also of Matt and George Kimes, two of the best danged bank robbers in the Indian territory.

Get the facts—but get them right. A whole people has been wronged.

BOOMER SOONER BAYLE

WASHINGTON, D. C.

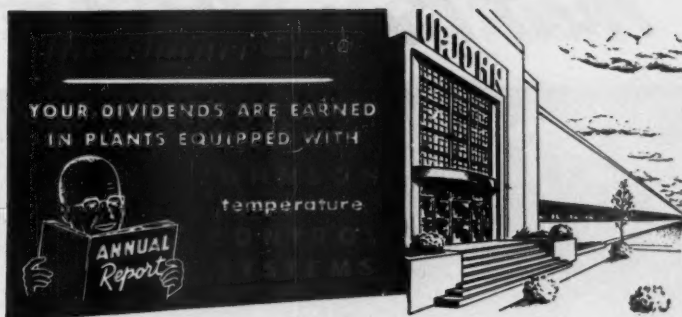
FORMERLY SAPULPA, OKLA.

• Boomer Sooner Bayle should look again to BUSINESS WEEK's lead sentence. It read, "In all the rip-roar of Texas there was none like Tom Baker Slick." BUSINESS WEEK assumed any reader would take the sentence literally, hence Tom Slick could only come from Oklahoma.

Science Looks for Oil

Sirs:

The roles that the sister earth sciences—geology and geophysics—play in the search for oil and gas is spotlighted in the heading of your article on "Oil: Before You Pump It You Have to Find It" [BW—Oct.13'51,p22]. All too frequently the businessman and the general public are left uninformed as to the tremendous job that some 10,000 scientists are performing in the search for new oil fields to maintain our present supply and meet the increasing requirements of the defense program. Out of 5,290 exploratory wells drilled in 1950 in search for new fields, 4,193 were located by the use of scientific methods. 12½% of the tests drilled on scientific advice were successful in finding 528 new fields, while only 3% of the holes drilled without such advice found production. (Statistics from Bulletin, American Association of Petroleum Geologists, pages 1123-1141, June, 1951.) The importance of



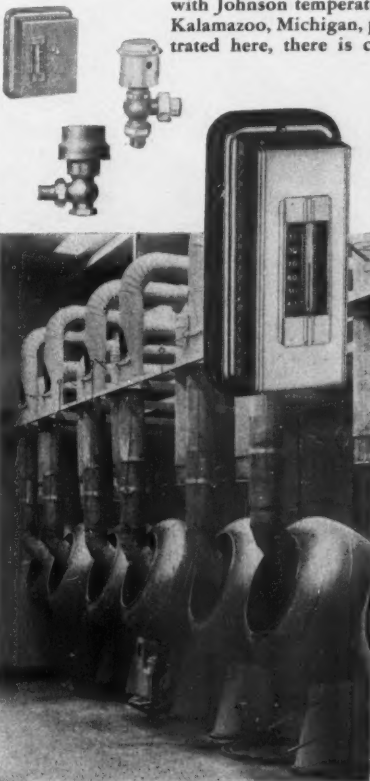
Because Johnson "custom-building" of each automatic control system better serves the temperature and air conditioning needs of every building. That's why automatic "brains" by Johnson are on duty in all types of buildings, everywhere.

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Products that s-p-r-a-y from *Spra-tainer* lead the way in today's race for sales. The public clamors for this "Modern Design." Old-style products are fast changing over. New propulsion products by the score are being sped to market.

Pressure Packaging on a widespread scale was first made possible by Crown's invention of *Spra-tainer* — the original light weight propulsion can . . . and still the leader.

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Raincoats for structures...

Sprayed, Brushed or Troweled on!

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Specify Flintkote Protective Coatings... for structural steel, exposed concrete, inside surfaces of masonry, insulation materials... wherever dampness and corrosion are a problem.

Flintkote Protective Coatings are available in both asphalt cutback and emulsion types, and can be applied by spray, brush or trowel.

Flintkote mastics, semi-mastics and liquid asphaltic compounds—fibrated and non-fibrated—meet all general requirements for various waterproofing and dampproofing systems.

Available also are asphalt primers, caulking compounds, membrane reinforcing and spandrel cloth—all of them effective "raincoats" for guarding structures against moisture.

Write for complete specifications and application data on using these efficient materials in both new construction and maintenance.



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The Flintkote Company of Canada, Ltd., 30th St., Long Branch, Toronto, Canada.

FLINTKOTE



keeping these men at work can scarcely be exaggerated.

WILLIAM B. HEROY
PRESIDENT, GEOLOGICAL INSTITUTE
WASHINGTON, D. C.

Higher Taxes

Dear Sirs:

The first example in the article "Tax Law May Spur Yearend Sales" [BW—Nov. 10 '51, p149] seems to me to be in error. In 1952, if I read the new law correctly, the taxable gain will be \$3,000 minus \$1,000 divided by 2, or \$1,000 at the taxpayer's tax rate. This contrasts with a \$500 taxable gain if made in 1951, as you correctly state.

How about it?

M. P. EPSTEIN

NEW YORK CITY

• You're right. If net long-term gain exceeds net short-term loss, you'll be taxed in 1952 on only 50% of the difference. In our example, that cuts the 1952 taxable gain down to \$1,000. In spite of this, it's still better to take your capital gains and losses this year, provided that net long-term gains exceed net short-term losses.

17 Years Too Old

Dear Sir:

BUSINESS WEEK says that the "federal wage-hour law was 30 years old last week" [BW—Nov. 3 '51, p39].

What federal wage-hour law is that old? Or is there some federal law that the government has successfully kept from the people—except the editors of BUSINESS WEEK?

The Fair Labor Standards Act of 1938 (the federal minimum wage and hour law) was passed June 25, 1938, 13 years ago.

ED MARCINIAK

EDITOR
WORK
CHICAGO, ILL.

• Nope, no inside information—just a little inside hitch. The wage and hour law is only 13 years old.

A Happy Bunch

Gentlemen:

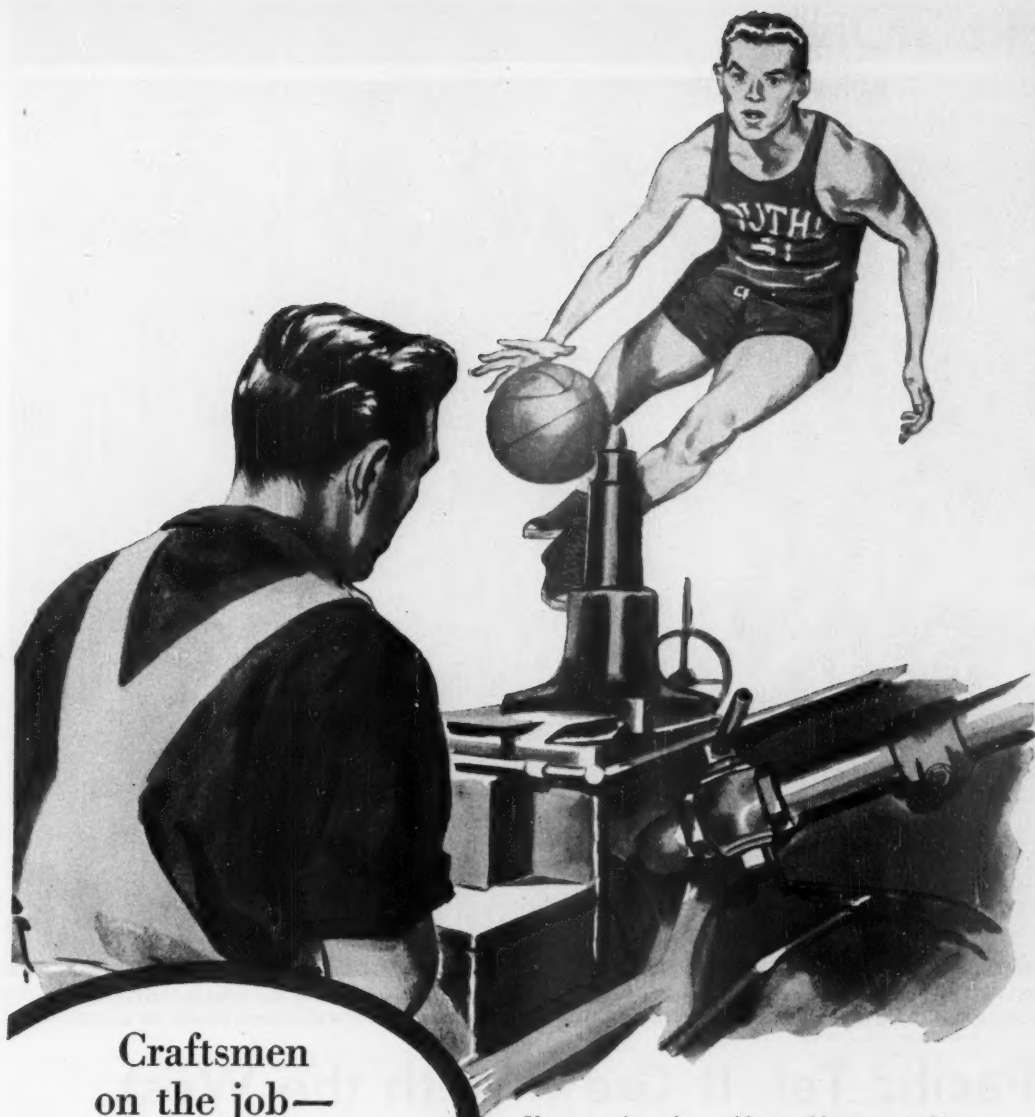
Having mentioned the ASA in your article on European standardization [BW—Sep. 29 '51, p63], maybe you will be amused to know:

Mr. Thomas D. Jolly (vice-president of the Aluminum Co. of America) is the retiring president of the American Standards Association. He is being succeeded by Mr. Roger E. Gay (president of the Bristol Brass Corp.).

It must be a happy group.

R. OAKLEY KENNEDY

NEW YORK CITY



Craftsmen
on the job—
and
“on the ball!”

You can take a thoroughly capable man, put him on a good machine, and still come up with only so-so results. But, if he's *on the ball* while he's on the job . . . if he takes pride in how fine a job he can do . . . then you come up with the kind of work that Columbia and Summerill craftsmen turn out. Highly uniform, *quality* products!



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REGIONS



INSTALLING PARTY swoops down on a community each Saturday, puts in all the phones it can. This helps Pacific Telephone

& Telegraph Co. catch up on its terrific backlog of orders. A spectacular example of the western boom is the expansion of . . .

Pacific Tel: It Grew With the West

It's common knowledge that the Pacific Coast has been growing at a terrific clip during the last 10 years. But if anyone should doubt it, all he has to do is take a look at the postwar record of Pacific Telephone & Telegraph Co. This company, naturally, has had to grow along with the area it serves; consequently, the company's history since V-J Day is a fair index to the postwar history of the entire Pacific Coast.

Since the end of the war, Pacific Telephone & Telegraph has come within a hair of spending a cool billion dollars on plant expansion. This is more

than any other AT&T subsidiary, and it is more than any other utility in the country. (Closest competitor for the title was another Pacific Coast company—Pacific Gas & Electric—which laid out \$750-million.) In spending its billion, PT&T more than doubled its prewar size.

• **Not Finished Yet**—And the company plans a lot more expansion for the future. Last week, to raise more capital, it offered shareholders 633,000 shares of \$100-par common stock. The week before, on Nov. 20, it had issued \$30-million of debenture bonds. These offers will bring the total of new

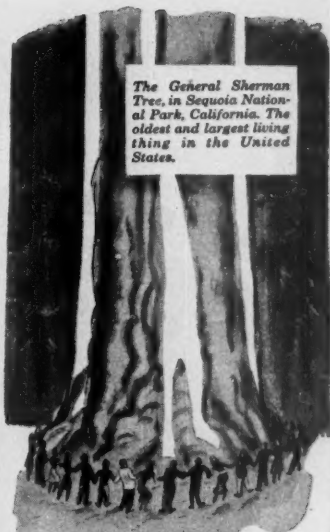
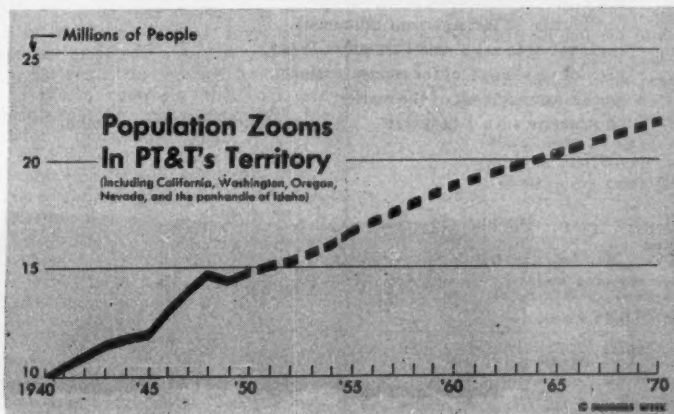
permanent capital raised since V-J Day up to \$660-million. In the 68 years before the war, the company had raised only \$403-million.

But no matter how much capital the company raises and how fast it expands, it will be a long time before it catches up to the West. Demand for telephones has climbed so fast that at the end of this October the company had 104,000 unfilled orders—as against 30,000 at the end of 1942. And in 1942, remember, PT&T was only half as big as it is now.

• **Mushroom**—It has never been any secret that a lot of new population is



TELEPHONE is hooked into a circuit by member of the installing party. New houses had to wait three or four months before they could get phones.



The General Sherman Tree, in Sequoia National Park, California. The oldest and largest living thing in the United States.

HARD TO BELIEVE?

Unless you see the General Sherman Tree for yourself, you might find it hard to believe that any tree could be 272 feet tall, 101 feet in circumference, and between three and four thousand years old.

And unless you see Patapar Vegetable Parchment for yourself, you might find it hard to believe that any paper could remain strong when wet, be grease-resistant, odorless and tasteless, and stay strong and attractive after boiling and freezing.

LET US PROVE IT!

If you do find this hard to believe, let us prove it. Standard weights and types of Patapar are ideal for most uses. When certain qualities are especially desired—we recommend special types. Altogether we've developed 179 different types of Patapar to perform a myriad of jobs.

SOME OF PATAPAR'S MANY APPLICATIONS

Patapar—plain or colorfully printed—is excellent for packaging all kinds of perishable foods, such as butter, ice cream, celery, lard, fish, poultry, cheese, margarine, tamales, shortening, ham and bacon. Industrial uses include rubber transfer stocks, separators for special batteries, soap mold liners, dialyzing membranes and drafting paper.

Do you anticipate some future requirement for Patapar's unique properties? If so, now is the time to start planning. Write today for Booklet T, "The Story of Patapar."



Look for this Key-mark on Patapar food wrappers

Patapar

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MANAGEMENT MEN ARE TALKING ABOUT . . .

ABC • ADP



A MCGRAW-HILL PUBLICATION, MCGRAW-HILL BUILDING, NEW YORK 36, N. Y.

"... the only way out was to build new plant—lots of it..."

PACIFIC TEL begins on p. 94

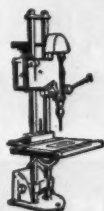
continually pouring to the Pacific Coast, and from the beginning PT&T was careful to allow plenty of margin for expansion in installing its equipment. Cables and switchboards were geared to take on constantly growing loads. In this way—at first—no strain was felt. New people coming in moved to the established centers of population. If they wanted phone service, it was an easy matter to hook them up to existing facilities.

Then came the war, and it put a quick end to this serene picture. War-time migration overflowed the cities, flooded into small towns and outlying areas. The company was suddenly swamped with thousands of orders for phones—in places where it had never expected to install more than a few hundred. Existing cables and switchboards weren't enough. So the only way out was to build new plant—lots of it.

• **Still Booming**—Many people thought that this tremendous rise in population was a wartime freak that would slacken when the defense plants closed down. It wasn't. The war plants not only stayed; they expanded. California alone continues to gain 1,000 a day in population. Spokane, Wash., center of a wartime aluminum industry, had 38,837 phones in 1940; now it has 78,700. Portland started 1940 with 103,000 phones, ends 1951 with approximately 202,000.

But it was the small towns, catching the overflow from the cities, that came up with the really spectacular increases. In Oregon, neighboring Eugene and Springfield had a combined total of 8,916 phones in 1940. As of last September, they had 27,963. Vancouver, Wash., across the Willamette River from Portland, jumped from 5,037 phones to 16,602. And it was these smaller towns that spelled trouble for the phone company; the load was simply too heavy and came too fast for existing equipment to carry.

PT&T serves California, Oregon, Washington, Nevada, and part of Idaho. The total rise in phones in this territory was from 2-million in 1940 to almost 4½-million in 1951. Actual population rose from 10-million to 15-million. The company expects that figure to hit 22-million by 1970. And since past experience seems to indicate that the number of phones rises faster than the actual population (perhaps due to a concurrent rise in the standard of living), the jump from 15-million to 22-million rep-



100,000 "defense plants"

SHOPSMITH is the revolutionary power tool that converts from a circular saw to a disc sander, wood lathe, vertical and horizontal drill press. It also converts basements and garages into miniature "defense plants."

How?

By helping to relieve two kinds of pressure. One is the pressure of urgent, accelerated business. Busy defense workers and executives by the thousands turn to **SHOPSMITH** for refreshing relaxation. It soothes as it smooths, cuts and drills — gives a complete mental recharge in one evening.

The other is the pressure of civilian buying. A good many of the 100,000 **SHOPSMITH** owners make their own furniture and built-ins, do their own remodeling and repairing, help to free men and machines for defense production.

Then, too, quite a few **SHOPSMITH** craftsmen help industry directly by fabricating wood, metal and plastic parts in their home workshops — everything from simple carrying cases to intricate patterns for machine castings.

There's more power tool per pound of steel in **SHOPSMITH** than in any other heavy-duty tool. It costs just \$189.50 complete except for motor (special ½-hp., capacitor motor, \$34.50). You can see **SHOPSMITH** demonstrated at any Montgomery Ward store or leading hardware and department stores. Or you can read about it in the 16-page illustrated **SHOPSMITH** and accessory catalog. We'll be glad to send you a free copy.



Magna Engineering Corp.

Dept. 194-H, at factory nearest you:
12819 Colt Road, Cleveland 8, Ohio, OR Menlo Park, California

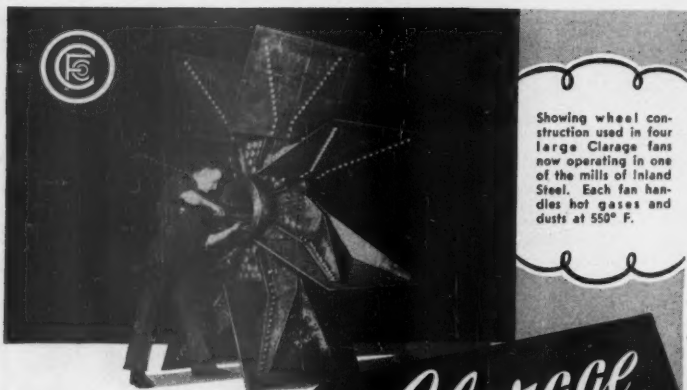
Please send me the 16-page **SHOPSMITH** catalog.

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Showing wheel construction used in four large Clorage fans now operating in one of the mills of Inland Steel. Each fan handles hot gases and dusts at 550° F.

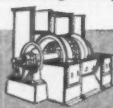
We build 'em **HEAVIER** than common practice! That's why Clorage equipment will take a lacing day after day, on your most difficult job, without performance failure. Yes, to see Clorage **FIRST** is invariably a wise and profitable move.

CLORAGE FAN COMPANY

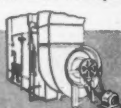
Kalamazoo, Michigan

Application Engineering Offices in all Principal Cities

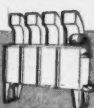
Clorage
—HEADQUARTERS FOR AIR HANDLING
AND CONDITIONING EQUIPMENT



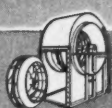
MECHANICAL DRAFT



INDUSTRIAL AIR CONDITIONING



FACTORY AND SPACE HEATING

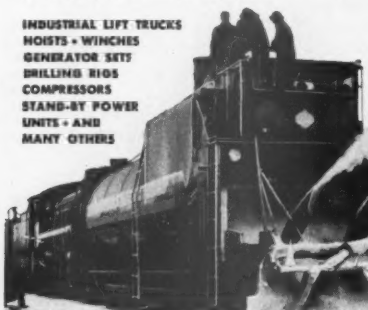


AIR FAN FOR INDUSTRIAL PROCESSES

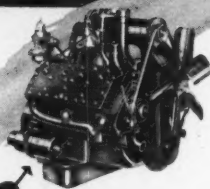
● Here is an effective means of clearing tracks in railroad yards or open country: snow is either blown aside or stored and melted for later draining. And again, Ford Industrial Power was chosen for this low-cost operation.

Ford Industrial Engines and Power Units are available in five engine series, ranging from 4-cylinder, 120-cu. in. to V-8, 337-cu. in. displacement, each designed and built for industrial uses. If you are planning defense production on any of the applications listed below, for economical and dependable power, specify Ford Industrial Engines:

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**YOUR JOB IS WELL-POWERED
WHEN IT'S FORD-POWERED**

"... the need for new service completely overran the switchboard ..."

PACIFIC TEL begins on p. 94

resents a much bigger jump, percentage-wise, in phones. The next 20 years will see no rest for PT&T.

• **Palo Alto**—There is no single sore spot in PT&T's territory; almost every community presents the same problems. Typical of these is Palo Alto, a residential suburb of San Francisco.

In 1940 the Palo Alto exchange served 11,637 phones in that city and a couple of small neighboring communities.

By V-J Day that had grown modestly to 13,529. Wartime bottlenecks in transportation had stemmed the normal drift to the suburbs, but when the war ended the tide broke loose on a gigantic scale. People poured out of the overcrowded cities. Another big wave, at the same time, was coming in from the East. The result was a sudden and unprecedented growth in small communities. Of such stuff California's housing boom was made.

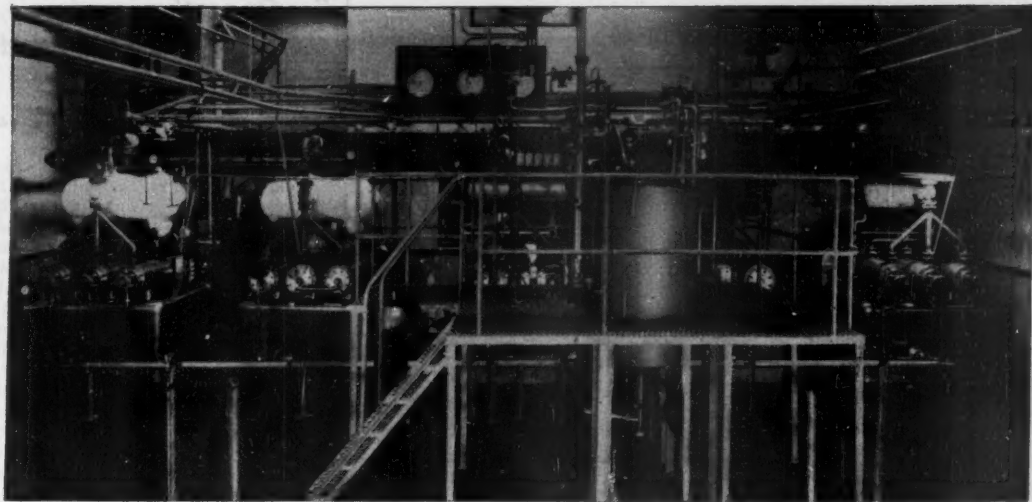
From its 13,000 phones on V-J Day, Palo Alto's figure shot up to 28,500 in October, 1951. In the same span, the value of its telephone plant went from \$24-million to \$77-million—almost tripling itself.

• **The Rub**—When the housing boom hit in 1946, it hit in the wrong places as far as the telephone company was concerned. New houses weren't just put up on vacant lots on established streets, but in big new tracts of land outside the town.

This meant that the company had to put in miles of new cable. And this wasn't all. The more cable you have running into any central switchboard system, the bigger the switchboard has to be. So the company had to build central office equipment as well.

And in the spring of 1951 PT&T simply lost the race. In Palo Alto the need for new service completely overran the switchboard—even though the company had been enlarging it feverishly. For a couple of months that spring, new installations of phones practically came to a halt.

• **Installing Party**—In the meantime, of course, people were hollering for service. It wasn't unusual—and still isn't—for a family to move into a home and be without a phone for three or four months. So to serve them as fast as possible, PT&T thought of the idea of launching special installing parties every Saturday. All available installers are gathered from neighboring areas, and, at time and a half, they descend on a new community on Saturday morning



Five VOTATOR Slush-freezing Units (in background) chill orange concentrate from 65 to 18½ degrees, the best temperature for packing and freezing. Each unit processes 3,170 pounds per hour continuously, eliminating need for cold-wall tanks or other preliminary cooling.

NO OPERATORS IN THIS PICTURE!

VOTATOR Slush-freezing Units at Minute Maid process automatically and continuously

Efficient operation at Minute Maid Corporation calls for fast continuous processing. That's where VOTATOR Slush-freezing Units come in . . .

These units take the concentrated orange juice coming from evaporators, and convert it to a sherbet-like ice—in just a few seconds. This is accomplished under precise, automatic control, with resultant savings in labor and time.

Equally important to the man-hour saving is the improved quality control with this automatic, closed-system process. The variations inherent in batch processing are eliminated. Operator error is not a factor. And the closed system, which excludes air, protects flavor, vitamin content, and purity.

Throughout industry, VOTATOR Heat-transfer Apparatus is being successfully used for heating and cooling, sterilizing, plasticizing, emulsifying, crystallizing, quick-freezing, and aerating. If you process any liquid or viscous materials, it will pay you to investigate. Take the extra operators out of *your* picture.

VOTATOR—T.M. Reg. U.S. Pat. Off.



Tremendous appeal of frozen concentrated orange juice is based on protection of delicate flavor and vitamin content. Processing in a fully enclosed system excludes air, thus minimizing oxidation and preventing contamination.

WANT INFORMATION?

This 32-page booklet gives the complete story on continuous processing of a wide variety of industrial and food products with VOTATOR Heat-transfer Apparatus. Complete with 12-page technical section. Write for your free copy—now. The Girdler Corporation, Votator Division, Louisville 1, Kentucky.



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largest surety organizations with countrywide
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inland marine insurance as well.

**NATIONAL SURETY
CORPORATION**

4 Albany Street, New York

**"...On a rather grand scale,
the company lives from hand
to mouth . . ."**

PACIFIC TEL begins on p. 94

and put in as many phones as they can.

Palo Alto's turn for the party came a few weeks ago. One hundred and 20 trucks and crews swooped down on the town (pictures, pages 94, 95), and when they left that night there were 312 new phones in Palo Alto. During the next 30 days the local exchange's own installers put in 1,100 more. But even after that frontal attack, Palo Alto still has a backlog of 1,235 unfilled orders.

• **Runs Into Money**—Palo Alto is just one in hundreds of similar communities throughout PT&T's territory. And to double and triple a plant in every one of these places takes money, and plenty of it. That's where the company ran into another snag.

As a fully regulated public utility, it can't keep many millions of dollars lying around idle. On a rather grand scale, it has to live from hand to mouth. Pacific Telephone does this by financing in arrears. It borrows a big slug of money from banks on short-term (one-year) notes and then arranges to pay them off from the proceeds of stock or bond issues. It taps all the bigger western banks to the legal limit of their lending capacities, and borrows the rest from eastern banks.

The trouble with this system, particularly in these inflationary times, is that it puts a strain on the company's debt ratio. Earnings sag under the impact of inflationary costs and the need for swift expansion. As earnings sag, investors get less and less interested in common stock offerings.

So, to meet the tremendous need for capital, the company has to sell debentures. And up goes the debt ratio again. The higher it goes, the less popular common stock becomes, and the more debentures the company has to sell. By the same token, the higher the debt ratio, the lower the company's reserve borrowing power. It's a vicious circle and could lead to trouble if not kept under control. But it's one of the things you have to put up with when you're expanding at so phenomenal a rate.

• **More Than Its Share**—At the moment, Pacific Telephone has spent \$967-million on expansion. The entire AT&T system, including the main stem in the East and all the big operating companies across the country, plus Pacific Telephone, has managed to spend a total of \$6-billion. The Pacific Coast, in other words, has done one-sixth, phonewise, of the whole country's expanding.

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More CRANE VALVES are used than any other make!

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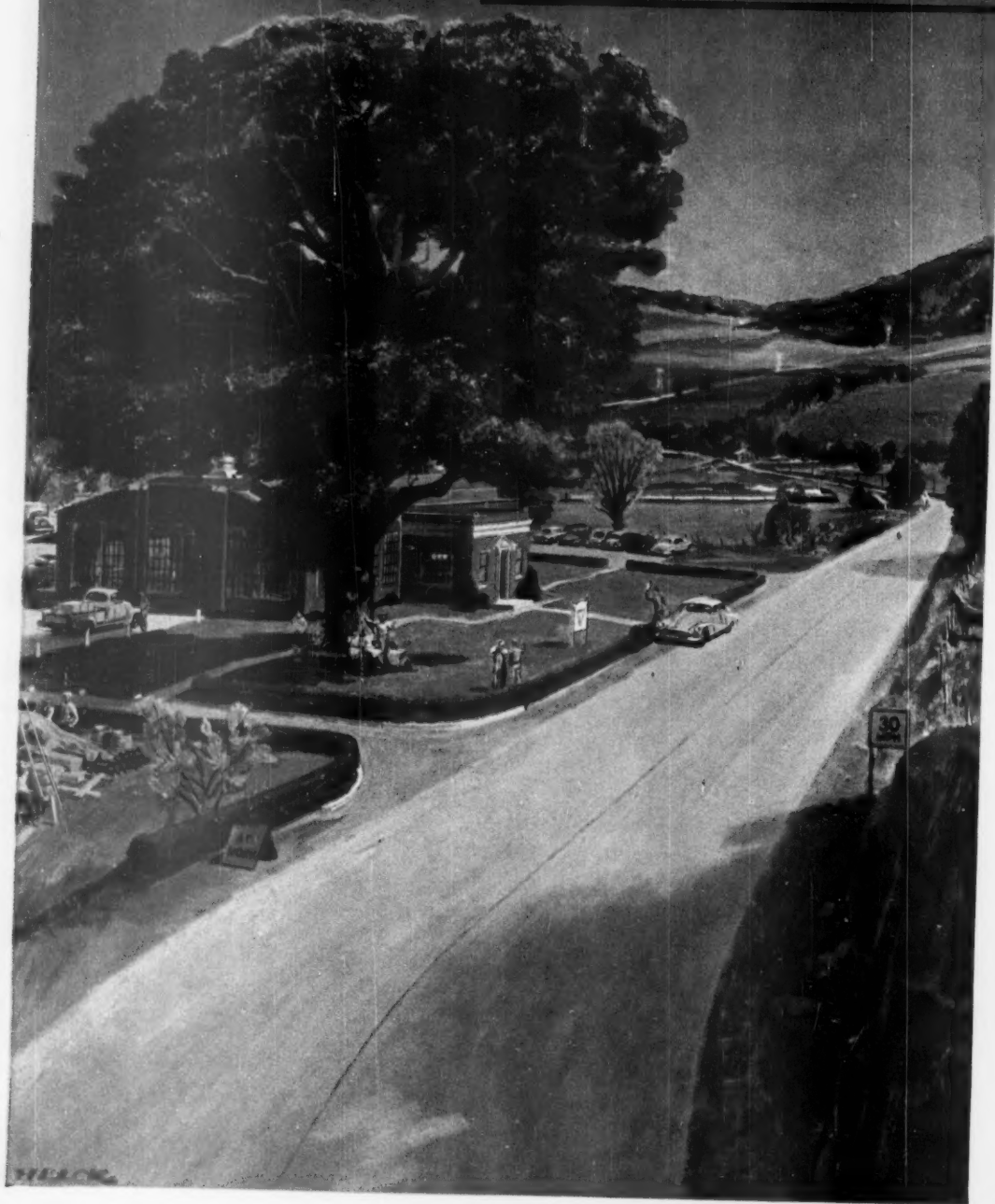


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Take a typical American with imagination and the yen to make something useful. Hand him a piece of Alcoa Aluminum sheet, or rod, or wire; light, strong, gleaming . . . invitingly easy to shape and fabricate . . .

It's like handing a piece of clear white pine to an expert whittler. You can almost see the ideas taking shape in his mind . . .

Thus many a small business has taken root, and grown, in aluminum.

Because all of us in Alcoa understand that challenge to "whittle" aluminum into useful things, this road we live on has never hurried

past the doors of small businesses. In fitting in their orders, in teaching them our skills, by serving each in his neighborhood through an Alcoa Distributor, we have always tried to go more than halfway.

It has paid us, in their loyalty, in the privilege of continuing to serve them as they grow.

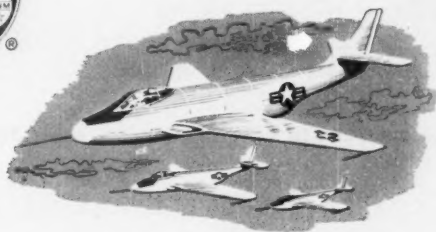
It has helped every American, by creating a good many of the million jobs that aluminum made possible. And by adding to our country's production strength for war or peace.

Besides, we've enjoyed it! ALUMINUM COMPANY OF AMERICA, 2193M Gulf Bldg., Pittsburgh 19, Pa.

A business built on Co-operation



STRONG ALUMINUM ALLOY NAILS are used to fasten siding on homes, eliminate the "pockmarks" and frequent painting that come with rusty nail heads. They're one of several products of Nichols Wire & Aluminum Co., Davenport, Iowa, who started using aluminum five years ago. Alcoa helped in Nichols' substantial growth, with research and alloy development that made possible stronger, corrosion-resistant nails. Their first experimental orders were fitted into heavy Alcoa production schedules; from knowledge gained by Alcoa pioneering, Alcoa men helped Nichols size up markets, develop such additional products as aluminum clothesline, roofing products and chain link fencing.



BUILDING A FIGHTING force or a civilian product, one reason for America's production might are thousands of small sub-contractors. Big plants reach out to them for special skills, like those possessed by J. Clytel Manufacturing Co., Cleveland. You might call Clytel "fabrication artists" in sheet metal, if you watched them today, producing complex Navy aircraft blade antenna of Alcoa Aluminum. They say, "Our help from Alcoa started with our first aluminum order, 6 years ago. Working with us, taking us to your own Development Shops to learn your skills, and aiding us ever since whenever a question of fabricating, or welding, or forming, or assembly came up." Thus Alcoa's aluminum knowledge has been multiplied; thus aluminum has created jobs and helped build a stronger, better America.

ALCOA *first in* ALUMINUM

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with good reason. Consolidated Enamels provide the fine printing qualities necessary to reproduce delicately detailed drawings and photographs. Yet, thanks to the revolutionary papermaking process which Consolidated pioneered, their cost averages 15 to 25% below old style, premium-priced enamel papers.

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***Consolidated* ENAMEL PAPERS**

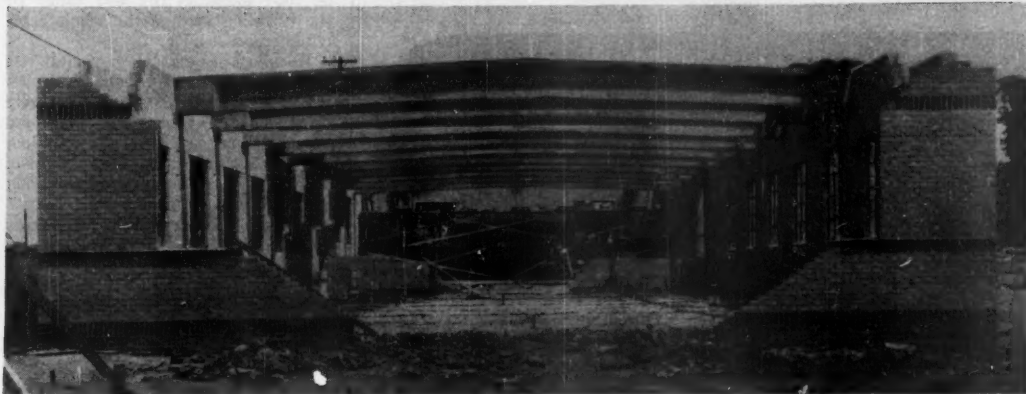
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PRODUCTION



CONCRETE comes into its own, supporting the roof of this building in Tulsa. Similar beams are used for the spans of bridges as. . .

Defense Needs Boom Prestressed Beams

Defense-created shortages of construction materials have given prestressed concrete beams the boost that they have been needing for years.

Prestressing has been known a long time (BW-Mar. 4 '50, p. 52), but in the U. S. at least it hasn't been loved. A few pioneers kept plugging it, but generally contractors shied off. Then, with Korea, came the shortage of structural steel. It looked as though a lot of needed buildings and bridges couldn't be built. Engineers scurried frantically for a way out. And surprise, surprise, they found prestressing—which they had known all along. The result: 40 jobs under way; perhaps 10 times as many next year.

- **Used Abroad**—In Europe, where there has always been a chronic shortage of steel and cement, prestressing has been used increasingly since 1929.

Not so in the U. S. Here, a vicious circle came into being. Contractors, knowing little about prestressing, added a solid ignorance factor to bids on jobs that called for the technique. Because bids were high, there were fewer and fewer calls for prestressing. And because there were few jobs, the body of engineering knowhow failed to grow.

- **Bridges**—The costs born of ignorance canceled out the big advantages of prestressing—cheapness and economy of materials. Apart from some pressure pipes and silos, few structures used prestressing until 1950, when the city of Philadelphia called for it in specifications for a fair sized bridge. Before that job was finished, the Nashville (Tenn.) firm of Bryan & Dozier landed a contract for another prestressed concrete bridge. Despite the handicap of a rela-

tively inexperienced construction crew, the job was finished in two weeks, with the use of prestressing methods worked out by John A. Roebling Sons Co.

Encouraged by that job, Bryan & Dozier ran up a concrete grandstand that cost so little that the industry still thinks it isn't so. Around Tulsa P. F. Blair & Son has used prestressing on industrial buildings.

The trade decided that prestressing had really come to stay last summer when Austin Co., of Cleveland, demonstrated beams for buildings (BW-Aug. 25 '51, p. 53). Austin, one of the top builders of steel structures, announced later that it was planning to use very large beams on a local job.

- **Matter of Tension**—The principle of prestressing is simple enough, rooted in the essential characteristics of concrete. In a building, beams are subject to two opposite types of stress—tension and compression. As the beam takes its load, the top part is under compression, the bottom under tension. (Like a piece of wood under strain, where the upper side wrinkles and the bottom cracks apart.) Concrete is highly resistant to compression, but it is weak in the face of tension. Thus a pure concrete beam would have to be immensely thick—and uneconomical—to support a heavy load.

Prestressing beats this rap. After the concrete beam has been cast, steel cables are introduced into it. Powerful jacks pull the cables taut, putting the concrete under compression. This is prestressing.

When the prestressed beam takes its load, the tension on its lower part merely lessens the compression that has

already been built in. Hence, the tendency to crack is counteracted.

- **Steel Bars**—Reinforcing of concrete is the standard method used to strengthen it. In this, steel bars are introduced into the concrete beam. Such a beam is far stronger than pure concrete. But it has this disadvantage, that the steel bars themselves bear the whole strain of tension. If they stretch or shift position, the strain falls on the concrete—which at this point is no stronger than it would be without the bars. There is no compression factor to balance the tension.

To increase the strength of a reinforced beam, it is necessary to add more steel rods, or stronger ones. That in turn means that the size of the concrete beam must be increased proportionately. And the wastage of concrete is great.

The prestressed beam needs much less concrete; it also used much less steel. Partly, that's because the concrete itself bears much of the load. Partly, it's because in prestressing, it is possible to use steel with as much as five times the strength of types suitable for reinforcing.

Another advantage for prestressing lies in the formwork, or molds. Reinforced beams are usually poured on the job, as an integral part of the structure. This requires tailor-made molds. The prestressed beams can be precast, in sections, with one mold being used over and over again. On the job, the precast sections are strung together like beads on a string. The pressure from the prestressing holds them from slipping, thus replacing the formwork need for pouring reinforced beams.

- **How It's Done**—Roebling, one of the few old line firms that has always been

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Overhead Cranes—move the heaviest loads safely and quickly!

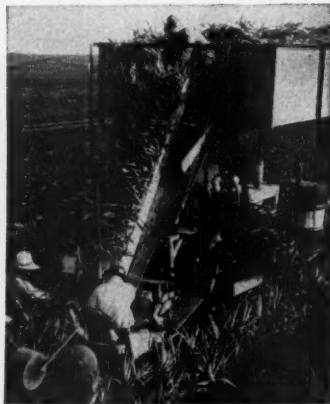
Electric Chain Hoists—fast, economical lifting!

partial to prestressing, has worked out a new technique to increase its savings, at least in time. In Europe prestressing is done by putting pressure separately on each strand of the wire cable. In the Roebling method the whole cable is tightened at once.

Roebling also ran a pragmatic test of prestressing vs. reinforcing. In its Chicago warehouse it laid concrete floors of both types, with wear and strain the same. The reinforced floor has pounded to pieces under use. After over three years, the prestressed section has yet to show a crack.

• **Yardstick**—Prestressing is still so new in the U.S. that it's hard to figure out the exact dollar savings that it offers. Some of its costs could still be written off to experiments; the canon is still open on its essential costs. Indeed, some contractors deliberately take losses on jobs, just to get experience.

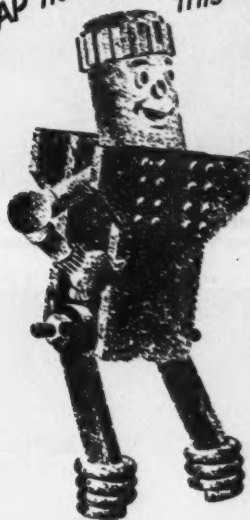
But the industry now agrees that prestressing is economical, from design to finished structure. Frederick S. Merritt, associate editor of Engineering News-Record, a McGraw-Hill publication, cast light on the subject at a recent meeting of the American Society of Civil Engineers. In a school designed by Merritt, the prestressed beams needed only one-tenth of the steel that would have been needed in a steel structure. Compared with reinforced concrete, one-fifth as much steel was used, and one-third as much concrete.



Pineapple Planter

Hawaii's pineapple plantations are several jumps closer to completely mechanized planting with this newly modified tractor developed by Hawaiian Pineapple Co. It still isn't the ultimate because men have to ride the rear and jab pineapple tops into the ground by hand. But the new machine plants three beds at a time instead of one. It opens the planting furrows, lays mulch paper to keep moisture in the ground, and closes the furro after the hand planting.

*Listen, pardner, how much
SCRAP have you turned in
this week?*



Today, the steel business is your business —it needs all your **SCRAP**, Now!

SUPPOSE that every steel user were suddenly told that he had to turn in a half-ton of scrap before he could get a ton of steel. It would start the most gosh-almighty treasure hunt for scrap that ever happened.

In effect, this "no-scrap, no-steel" situation virtually exists. For without *all* the scrap that industry can search out and start on its way to the mills, steel production will surely drop. It's as serious as that.

More scrap is urgently needed. Today the mills are turning out more steel than ever before. But they're scraping the bottom of the barrel as far as scrap is concerned. Defense and domestic demands for steel simply

cannot be met unless at least 100,000 tons of "purchased" scrap roll into the furnaces—every day.

The bulk of this scrap must come from industry. That's why we're asking for your all-out help. That's why it's so important that you make the drive for scrap part of your daily operations. Make it your business to encourage every employee to report any obsolete, broken or worn-out machinery, tool or equipment that has seen its day. From this dormant "junk" must come the heavy melting scrap that the mills need most. Don't let your scrap lie idle; send it on its way. How about it, pardner?

You'll find your local scrap
dealers listed in the yellow
pages of the phone directory.



This page would ordinarily be used to tell you about

PRODUCTS OF UNITED STATES STEEL

but, because without **SCRAP** we cannot produce steel,
we are asking instead for your all-out help in getting
more **SCRAP** to the mills.

UNITED STATES STEEL SUBSIDIARIES

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UNITED STATES STEEL



1 Degreasing is the first step in Van der Horst's iron plating method of rejuvenating worn diesel cylinder liners.



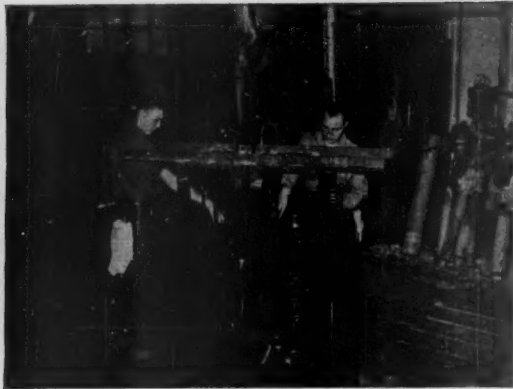
2 Boring smooths the worn cylinder, makes it truly round before depositing Vanderloy M iron to replace worn-off metal.



5 Cylinder is submerged in the iron plating bath, and an anode is inserted into the cylinder bore. Keeping the solution pure is the most ticklish part of the plating operation. It requires frequent checking of acid intensity and degree of contamination.



3 Coating of stop-off wax keeps the iron from plating on to sides and other surfaces of the cylinder.



4 Wax is stripped from the interior wall to expose the cylinder surface to be plated with Vanderloy M.

Iron Plating Cheats the Scrap Pile

The steel shortage that's taking its toll of replacement parts is forcing management to take another look at worn out machinery before scrapping it. Often a good patch job can prolong the life of the machine and save the company a lot of money.

Van de Horst Corp., Olean, N. Y., claims that its new method of plating pure iron to any desired thickness will keep many still usable parts out of the junk heap. Called Vanderloy M, the process replaces the worn-off metal. It can extend from three to five times the life of railroad diesel crankshafts and

cylinder liners, compressor cylinders, and pump plungers in oil field equipment.

• **Railroad Bonanza**—A 20-in. diesel cylinder liner normally costs about \$1,550 and consists of about 1,700 lb. of high quality cast iron. For about \$500, such a worn cylinder can be made as good as new with only 12.3 lb. of Vanderloy M electrolytic iron.

In normal railroad operation, such a diesel cylinder liner is good for about 1-million miles, which it accumulates in two or three years. At overhaul time, the road used to bore the cylinder to an

oversize diameter (which meant using a larger piston). After some 0.060 in. of iron was machined out, the cylinder was beyond repair, and it then had to be scrapped.

One way of getting around this was to build up a porous chrome coating (a chrome plating with tiny pits to retain the lubricant). But porous chrome can't be plated beyond a thickness of 0.030 in. It gets too expensive, and dimensions can't be controlled.

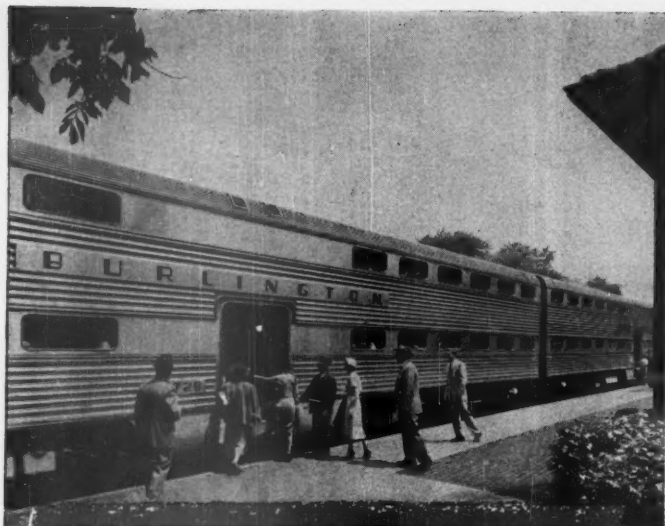
• **Deposits More**—Virtue of the Vanderloy M treatment is that it can deposit up to three times more material



6 Excess iron builds up around the ridge of the cylinder and has to be chipped and ground off. The cylinder diameter has now been restored to its original size.



7 Checking is the last step. Plating thickness must be on the nose.



FOR BETTER TRANSPORTATION... *Look to Burlington!*

Burlington leadership showed the way to the two basic ideas of modern freight and passenger transportation—mighty diesel power and sleek streamlined trains.

Leadership like that is a Burlington tradition. Here are three current examples:

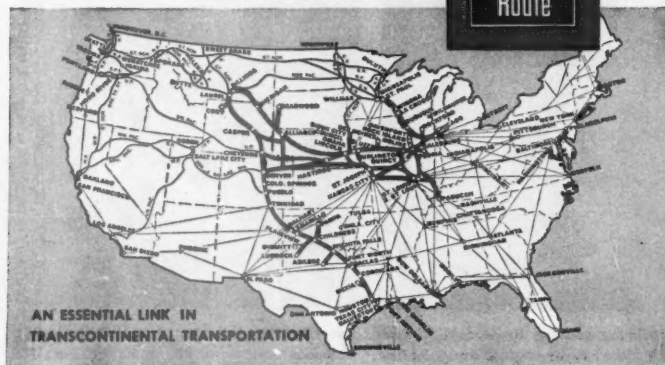
- Burlington's stainless steel, double-deck suburban coaches (above), setting a new standard of comfort, convenience and efficiency.
- Burlington's Vista-Dome cars, first to bring "penthouse views" to railroad passengers.
- Burlington's modern freight service—now faster and more dependable than ever.

This year, next year, every year... for better transportation, look to Burlington!

BURLINGTON LINES • Everywhere West

Chicago, Burlington & Quincy Railroad
Colorado and Southern Railway
Fort Worth and Denver Railway
The Wichita Valley Railway

**Burlington
Route**



in a cylinder than chrome coating can. That means that even after extensive wear a combination of Vanderloy M and porous chrome would restore the cylinder to its original dimensions. Such rebuilding to size saved the New York Central R.R. \$2.5-million in inventory alone. It didn't have to stock oversize pistons and piston rings.

The roads can also gain from the iron plating process in reclaiming diesel engine crankshafts. If the bearing on one gets badly scoured, it usually means spending \$6,000 for a new one. For one-third of that price, the road can reclaim the old crankshaft. Van der Horst says its iron plating buildup is better than metallic sprays because Vanderloy M is automatically bonded to the base metal. Sprayed-on molten metal isn't quite so strong.

• **New Fields**—Van der Horst still doesn't know the full scope of its new process. Steel companies are investigating it for use on shafts for ladle cranes, which wear quickly. Columbia Records would like to give the process a try in making master records. In Minneapolis, the Vari Corp. is plating copper tips of soldering irons with Vanderloy M—it keeps the hard-to-get copper heating element from being dissolved by the hot solder, makes it last longer.

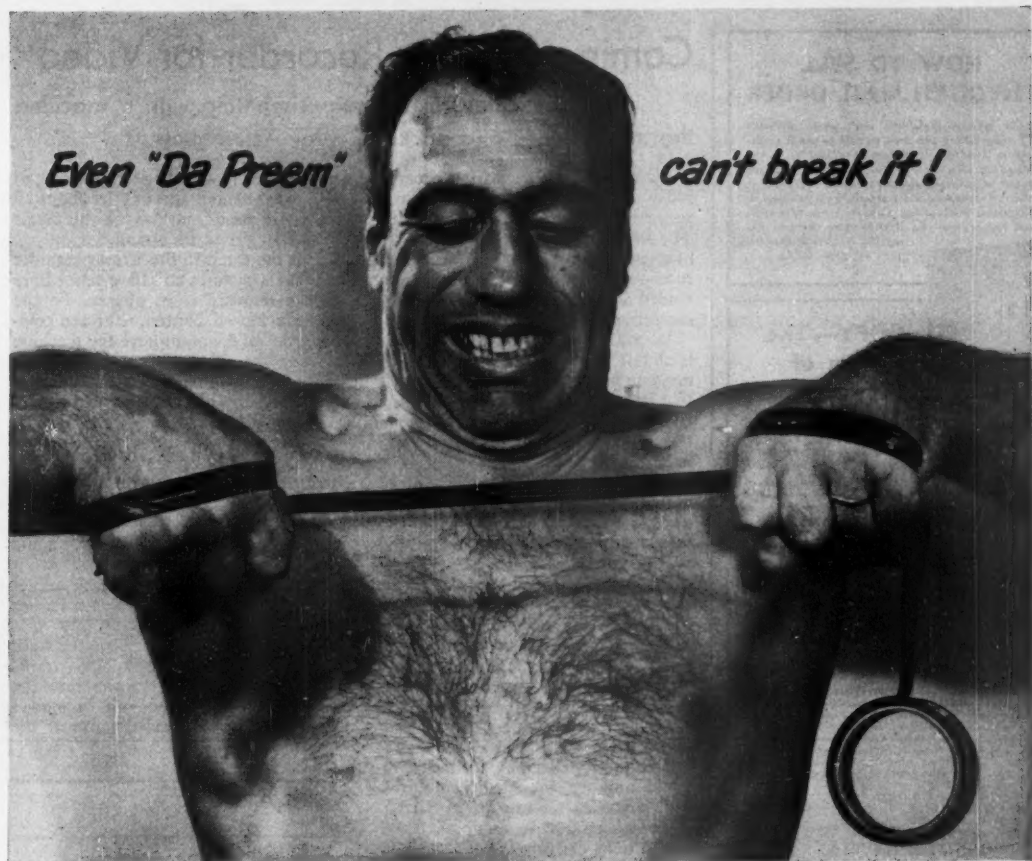
• **Age-Old Problem**—Many electroplaters have been tinkering for years to find a satisfactory method of plating iron, but they never quite hit it. There were too many bugs for commercial electroplating, although the Treasury Dept. makes engraving plates of electrolytic iron for printing paper money. Here are some of the difficulties that Van der Horst had to overcome:

• Some plating baths were too hot, about 200F. That called for costly waxes (or other materials that won't take on the plate) with high melting points to use on the parts that weren't to be plated. The heat brought high losses and called for ventilating equipment.

• Other baths developed bubbles and pitting in the coating, which made the plating job unacceptable.

• Still other baths couldn't be kept clean of foreign material like sludge from the anode. Ferric salts would precipitate into a jelly-like mass that clogged up filters.

• **In the Bath**—According to John F. Poor, the company's research director and developer of the process, the secret of Van der Horst's success is giving the plating bath all the care you'd give a baby's milk formula. First, it requires a nearly pure bath. That's achieved by continuous filtering of the bath by adding chemicals to prevent separation of the ferric materials. Frequent chemical analyses also are made to check acid intensity and percentage of contamination from foreign material.



World's strongest tape?

Powerful Primo Carnera proves the startling strength of "SCOTCH" Brand Filament Tape No. 880—the stick-at-a-touch, pressure-sensitive tape that

holds in place the last lap of huge coils of strip steel at Crown Cork & Seal Co., Baltimore. And this tape can save you real money, too!



OTHER STRAPPING MATERIALS scratched steel, caused waste, required special application equipment at Crown Cork & Seal Co. Now short strips of "SCOTCH" Brand Filament Tape do a better job in less time. Order from your distributor today!

Quick Facts about "SCOTCH" Brand Filament Tape

- **SHOCK-RESISTANT**—absorbs jolts and jars again and again.
- **SAFE**—no sharp edges to injure workmen.
- **ECONOMICAL**—short strips handle big jobs.
- **TOUGH**—5 times the tensile strength, 50 times the tear-resistance of most industrial tapes.



The term "SCOTCH" and the plaid design are registered trade marks for the more than 100 pressure-sensitive adhesive tapes made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn.—also makers of "SCOTCH" Sound Recording Tape, "Underseal" Rubberized Coatings, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: Minn. Mining & Mfg. Co., International Division, 270 Park Avenue, New York 17, N. Y. In Canada: Minnesota Mining & Mfg. of Canada, Ltd., London, Canada.

HOW TO SELL THROUGH MAIL ORDER

1. A manual explaining every phase of mail-order selling and showing how to use it profitably in hundreds of businesses. Takes up everything from selecting a salable product to analyzing coupon ad and mail campaign results. Tells how to determine prospects and reach them via newspapers, magazines, radio, direct mail, etc.; how to prepare copy and layouts. By Irvin Graham, Account Executive, Roberts & Reimers, Inc. 466 pages, \$4.50

COPY—The Core of Advertising

2. This sound manual explains what kind of copy makes people buy. It shows how to find out who your prospect is... how to associate his wants with whatever you're selling... how to put into headline and text the punch that pays off in stepped-up sales. You'll find complete coverage of testing copy, constructing copy—how to get your copy seen, read and believed. By Aseop Glim. 258 pages, \$3.50

ADVERTISING PSYCHOLOGY and RESEARCH

3. Shows you the fundamentals of psychology lying behind successful advertising. Makes use of case histories to give you a practical, scientific approach to advertising, based on consumer research and the principles of psychology. Covers the field from the psychological objective in advertising... through advertising appeals and copy themes... to measurement of advertising effect, evaluation of media audiences, etc. By Darrell Blaine Lucas, Chairman of Dept. of Mktg., N. Y. U., and Stewart H. Britt, Dir. of Personnel, McCann-Erickson, Inc. 766 pages, 123 illus., \$6.50

CLEAR WRITING FOR EASY READING

Just Published!

4. A practical aid for getting ideas from a written page into a reader's mind. Supplies methods to help you inform, sell to, or influence others in any type of nonfiction writing; gives special attention to everyday writing, both in business and social life—office memoranda, reports, letters, etc. Says Howard Stephenson, Vice-President, Hill and Knowlton, Inc.: "... the very best and most practical treatise on factual writing to date." By Norman G. Shilde, Mgr., Publications Div., Soc. of Automobile Engrs. 176 pages, \$3.00

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☐ 1. Graham—HOW TO SELL THROUGH MAIL ORDER, \$4.50
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☐ 4. Shilde—CLEAR WRITING, \$3.00

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Coming: A Tape Recorder for Video

Crosby Enterprises is experimenting with a machine that may record and package a television show.

Many radio and television programs today are "canned" electronically to preserve them for future broadcasts. The sound of radio is transcribed on a magnetic tape by a recorder; or the pictures (and sound) of television are recorded on film by a special kind of camera called a kinescope.

In radio the art of tape recording is almost to the point where a canned program sounds like the real thing. But that isn't so with kinescope. Compared to a live broadcast, a film version on television is usually blurred, jumpy, or lacking in contrast. The reason is that the kinescope process is, technically, a long one. After a show is shot by a camera, the film negative is chemically developed. A positive film must be printed from the negative. And finally the film is screened on a television camera by a kinescope projector. Along the line, the kinescope program loses some quality before it ever goes out over the air.

• **A Dream**—For a long time the broadcasters have wished that they could put a television program on a magnetic tape in one step, the same way they handle a radio show. That way, in theory, they could improve the quality of canned TV, eliminate the expense of the kinescope process and its equipment.

But to an electronics engineer there's a difference between the sound of radio and the pictures of television. Take a time duration of one second in a TV program, say the instant when Hopalong Cassidy fires his six-shooter. When the gun goes "Bang!" the sound takes up only a small space on a reel of magnetic tape. In technical terms, the sound can be recorded by at most some 15,000 impulses per second.

If the picture of Hopalong were put on the tape, its impulses would take a much greater space in the same second. That's because a TV picture has many more electrical impulses than sound. In each video second there are 30 separate pictures, each containing 525 lines. And each line of a picture has a series of impulses that are the light and dark dots on a picture screen. The whole video second can add up to 4-million impulses.

• **Possibility**—Even so, Bing Crosby Enterprises, Los Angeles, has a laboratory model of a tape recorder that comes close to transcribing a TV program. To cram enough of the picture impulses on to a tape, the recorder uses a tape that's twice the width of sound tape, and runs at about seven times the speed. The picture impulses are, pre-

sumably, chopped into sections and put on the tape simultaneously by about 20 recording heads, instead of the single head that's used for sound.

But the catch to the Crosby recorder is that its pictures still have fewer lines than a standard video picture. So the pictures looked blurred. But the company thinks it can improve the machine to take the standard number of lines.

• **Production**—Frank C. Healey, executive director of Crosby's electronics division, expects to have a recorder for standard video pictures ready in six months, and commercial models in general use within a year.

With the recorder, a TV show could be transcribed directly from an iconoscope camera in the studio. Or it could be recorded at a distant station as it comes in over the long-distance line of the network. Once it was on a reel of tape, it could be played any time.

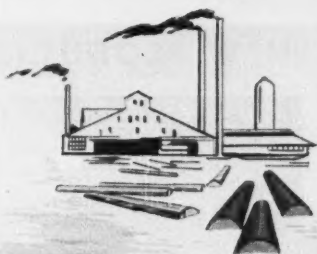
• **Economical**—Larry Crosby, the head of the firm, says that it is interested only in the research of the recorder, doesn't plan to manufacture or market it. Crosby won't make a guess at the eventual price.

PRODUCTION BRIEFS

Gas pipeline pumping will be cheaper when gas turbines replace reciprocating engines on lines 20 in. in diameter or larger. T. J. Putz, of Westinghouse Electric Corp., told the American Society of Mechanical Engineers this week that the gas turbine simplifies pumping stations, lowers maintenance, facilitates remote control, and ends water supply problems.

Versatile vinyl plastic just got itself another job, serving as a joint seal in concrete. Strips of B. F. Goodrich Chemical Co.'s Geon plastic make an easy-to-install, oxidation-resistant water stop in a concrete structure for a hydroelectric plant in El Salvador. The plastic seal strip soon will be available for concrete pavement joints and thin architectural walls.

An atomic battery using radioactive material as the energy source has been developed by the Ohmart Corp. of Cincinnati. These batteries, or cells, will be used by the company for its new line of instruments for measuring radioactivity. The atomic cell generates very little current, but it's enough for measurement purposes.



They did

A certain wood mill operator* came up with the answer to a problem confronting many management men today: how to produce more with what he had. He could see light if he could hit on a plan to increase the production of his wood room, without increasing physical plant capacity.

what

His method of attack is significant. Rather than call for just a quotation when it came to selecting electrical apparatus, the operator asked Westinghouse engineers for an operating proposal, a workable scheme. His staff and ours developed a system of many devices—motors, controls and the famous Westinghouse Rototrol®—to drive his log haul, log carriage and hydraulic barker at full capacity. Result: the capacity of the wood room was greatly increased, the yield per log was increased, and maintenance was reduced.

you can do

The formula used by this operator to solve his production problem can be applied to any industry, any manufacturing process. We want to work out that formula with you.

to produce more

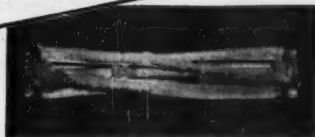
Your selection of actual devices can be made later. It's how you put them together that counts... whether motors, controls, transformers, electric furnaces or induction heating. Many manufacturers make good electrical apparatus. Westinghouse, in fact, makes a broader line than anyone else. But the priceless ingredient Westinghouse offers you, in addition, is the skill of broadly experienced engineers in putting together the right combination of good apparatus to let you produce more with what you have. Westinghouse Electric Corporation, Pittsburgh, Pa.

*name on request

YOU CAN BE SURE...IF IT'S
Westinghouse



NO DRUDGE ON DREDGE



FULLERGRAPT BRUSH ON CONVEYOR SAVES HOURS OF LABOR

Wet sand and pieces of oyster shell, accumulating on the under side of a conveyor belt on an oyster dredge of H. C. Rowe & Co. of New Haven required about six hours of arduous hand cleaning every time the boat docked.

Finally a new conveyor system, employing a semi-spiral Fullergrapt brush mounted just under the belt,

was installed. This Fullergrapt brush flicks the waste material into elevator buckets which carry it overboard... saving six hours of hand drudgery every trip.

If you are not enjoying savings that Fullergrapt makes possible, why not find out what Fullergrapt can do for you by writing to...

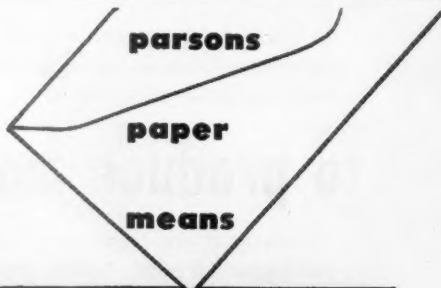
FULLER BRUSH

FULLERGRAPT

At home...
in business, too



THE FULLER BRUSH COMPANY • INDUSTRIAL DIVISION, 3650 MAIN ST., HARTFORD 2, CONN.



prestige by mail

Carry your mail advertising a step beyond anything the copy can say: insure a *distinguished impression* by using crisp

Parsons Papers, made from *new cotton fibers* by skilled craftsmen. As economical as any fine paper, letters on

Parsons add the *feel of quality*. Parsons offers you seven types of fine papers for documents and stationery from 100% new linen and cotton fibers to 25% new cotton fibers.



King Cotton, Parsons' guardian of paper quality, suggests you write for a **free package** and compare. Parsons Paper Company, Department 121, Holyoke, Massachusetts.

© PPC. 1951

NEW PRODUCTS



Window Deflates...

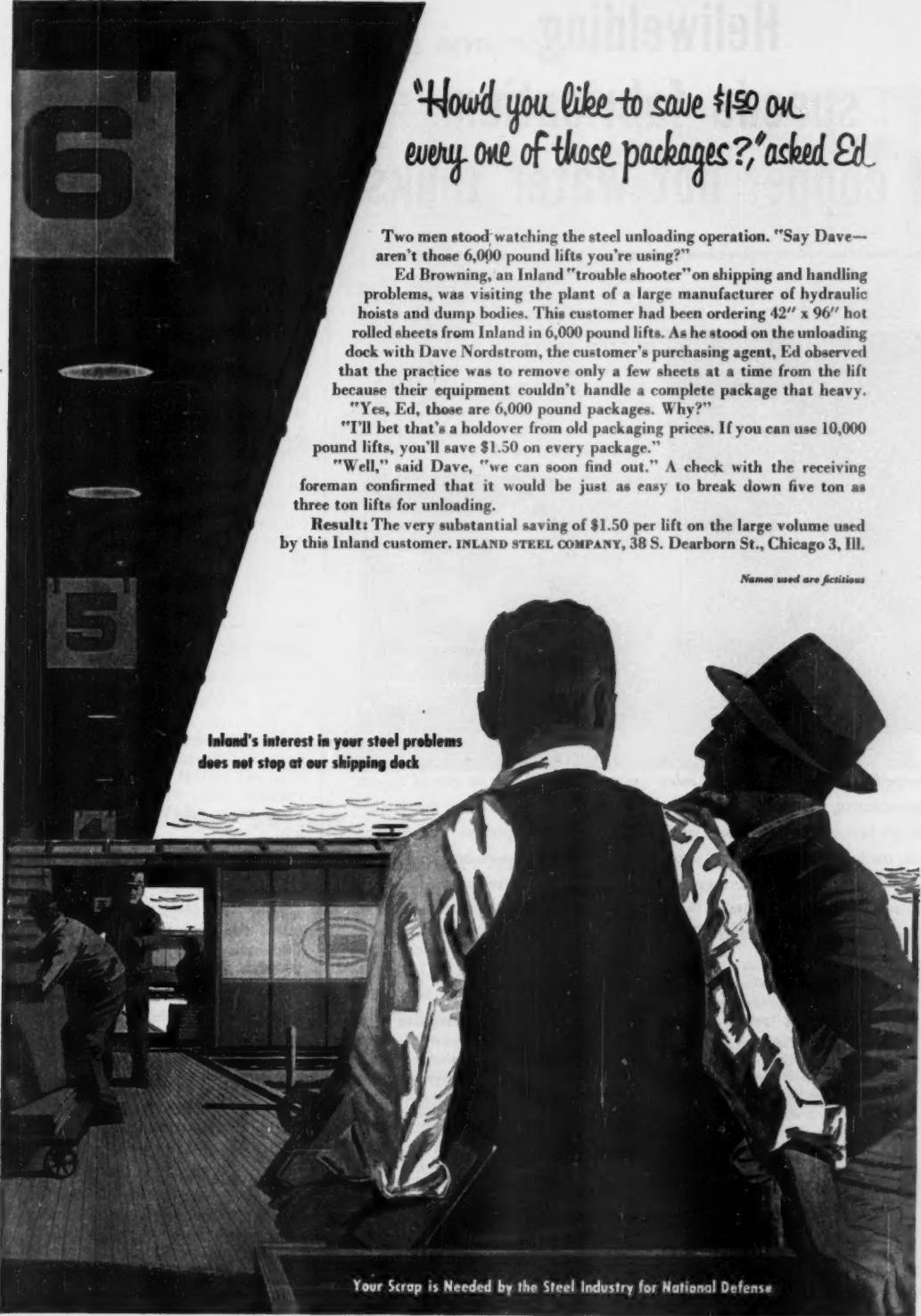


... Turns Inside Out

Skyscrapers are fine—except for the poor guy who has to perch outside, 30 floors or so above the ground, to wash the windows. Now a company has come up with a pivoted window that can be turned around so that the washing can all be done safely from the inside.

Here's how the window is sealed between spins. The solid plate glass pane is circled with a metal strip. In the center of the strip is a crude rubber shoe. This in turn fits over an inflatable butyl rubber tube (black line in lower picture). To turn the window, deflate the tube, and then spin the window around.

To reseal the window, inflate the tube with a compressed-air hose, and then



"How'd you like to save \$1.50 on every one of those packages?," asked Ed

Two men stood watching the steel unloading operation. "Say Dave—aren't those 6,000 pound lifts you're using?"

Ed Browning, an Inland "trouble shooter" on shipping and handling problems, was visiting the plant of a large manufacturer of hydraulic hoists and dump bodies. This customer had been ordering 42" x 96" hot rolled sheets from Inland in 6,000 pound lifts. As he stood on the unloading dock with Dave Nordstrom, the customer's purchasing agent, Ed observed that the practice was to remove only a few sheets at a time from the lift because their equipment couldn't handle a complete package that heavy.

"Yes, Ed, those are 6,000 pound packages. Why?"

"I'll bet that's a holdover from old packaging prices. If you can use 10,000 pound lifts, you'll save \$1.50 on every package."

"Well," said Dave, "we can soon find out." A check with the receiving foreman confirmed that it would be just as easy to break down five ton as three ton lifts for unloading.

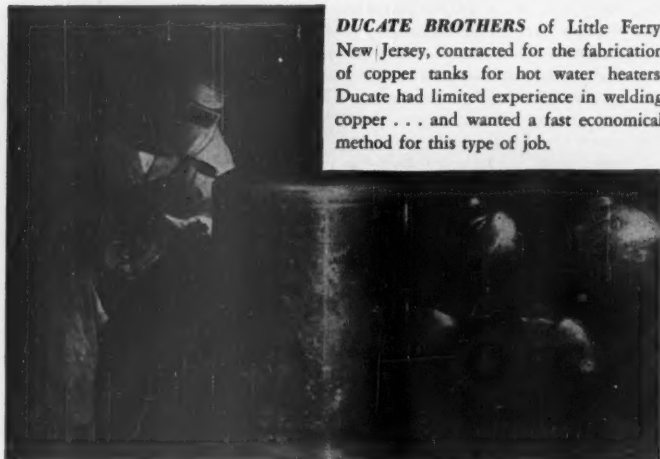
Result: The very substantial saving of \$1.50 per lift on the large volume used by this Inland customer. INLAND STEEL COMPANY, 38 S. Dearborn St., Chicago 3, Ill.

Names used are fictitious

**Inland's interest in your steel problems
does not stop at our shipping dock**

Your Scrap is Needed by the Steel Industry for National Defense

Heliwelding speeds fabrication of copper hot water tanks



DUCATE BROTHERS of Little Ferry, New Jersey, contracted for the fabrication of copper tanks for hot water heaters. Ducate had limited experience in welding copper . . . and wanted a fast economical method for this type of job.

George Kotcher, Airco Technical Sales Representative, was called in to recommend the best, and least expensive fabrication method—one that would avoid loss of time and money. He suggested the use of manual Heliwelding.

The company followed this sugges-

tion, and found that its rate of copper tank production was better than anticipated. More important, the method proved extremely economical, allowing complete control of welding variables—and resulting in smooth, high quality welds.

TECHNICAL SALES SERVICE — ANOTHER AIRCO PLUS-VALUE FOR CUSTOMERS

To assure its customers of high efficiency in all applications of the oxyacetylene flame or electric arc, Air Reduction has available the broad, practical experience of its nationwide Technical Sales Division personnel. The collective experience and knowledge of these specialists has helped thousands to a more effective use of Airco processes and products. Ask about this Airco "Plus-Value" service today. Write your nearest Airco office.



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AIR REDUCTION PACIFIC COMPANY
REPRESENTED INTERNATIONALLY BY AIRCO COMPANY INTERNATIONAL
Divisions of Air Reduction Company, Incorporated
Offices in Principal Cities

lock it up. The window is then hermetically sealed.

Adams & Westlake Co., the maker, is installing the window in the new Alcoa building in Pittsburgh.

• Source: Adams & Westlake Co., Elkhart, Ind.

• Price: About \$150.

Duplication by Melt

Watching leaves fall on the snow gave a Minnesota Mining & Mfg. Co. chemist a bright idea. The result: a new kind of duplicating machine called "Thermo-Fax."

The leaves on the snow absorb sunlight, become heated, and melt the snow. Thus they sink in, leaving their exact imprint on the snow. So with the duplicator. Take any printed page or drawing, cover it with Minnesota's heat-and-light sensitive paper, and put it in the machine. An infrared light flashes on. The duplicate paper absorbs the impression of the printing. This impression remains on the sensitive paper. In 15 sec. you have an exact duplicate of the printed page.

• Source: Minnesota Mining & Mfg. Co., St. Paul, Minn.

• Price: \$525. Paper from \$4.04-\$5.05 per 100 sheets.

NEW PRODUCTS BRIEFS

Castor oil is scarce—but Kelcastol takes its place, for industrial uses at least. Kelcastol—made by Spencer Kellogg & Sons, Buffalo—is completely soluble in ethyl and methyl alcohol; has the same viscosity, color, and nondrying properties as castor oil. What's more, it costs less.

One handy attachment will polish floors, furniture, and cars and also do your sanding, grinding, and drilling. It's called the Beal Speed polisher (from Portland, Ore.) and attaches to any tank-type vacuum cleaner.

Fixtures and lipstick cases—and everything in between—can be coated with United Lacquer Mfg. Corp.'s Lacquer BO 562. Applied by brush, dip, or spray methods, the lacquer should give any nonferrous metal object lasting protection against corrosion.

A tiny grinder, probably the smallest ever made, weighs only 12½ oz. The Desoutter pneumatic grinder, from Newage International, Inc., 235 E. 42nd St., N. Y. C., will run at any operating speed from near zero to 70,000 rpm. Handles the most delicate grinding jobs with great accuracy.

TURNING IDEA-CHEMICALS INTO DOLLARS



How they soften paper with hard-cash savings

Many times a production process can be improved by a change in basic raw materials. You may find some ideas for your business in this example of how a glassine paper manufacturer did it with a product from the Du Pont Polychemicals Department.

Glassine paper must be treated to make it soft and flexible. In an investigation for a better way to do this, a softening treatment was tried using Du Pont Crystal Urea—a white crystalline solid. It met all the requirements; the urea treatment keeps glassine soft in extremes of temperature and humidity. It is non-volatile—does not evaporate from the paper—and is nontoxic. And, best of all, the urea treatment costs several dol-

lars less per ton of glassine produced than other softening treatments.

Versatile Crystal Urea is a valuable chemical for many industries. For example, it is used in flame-retarding compositions, dentifrices, adhesives and many other products. It may pay you to investigate its properties for future applications in your field. Or you may find profitable ideas for the future among the more than 100 other chemicals and plastics made by the Polychemicals Department.

We will gladly discuss the availability of experimental quantities of these products for developmental work. Meanwhile, write on your business letterhead—tell us *your* industry—and we will send you information

on those of our products that have possibilities for you.

E. I. du Pont de Nemours & Co. (Inc.)
Polychemicals Department
1512B Nemours Building, Wilmington 98, Del.



REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

Polychemicals
DEPARTMENT
CHEMICALS • PLASTICS

FINANCE

FTC Turns a Sharper Eye on Mergers

THE 1951 MERGER FLOOD: Some recent deals — and some in prospect

PURCHASING COMPANY	COMPANY SOLD*	CONSIDERATION
BREWING AND DISTILLING		
Drewrys Limited, U.S.A.	Atlas Brewing Co. Schoenhofen Edelweiss Co.	Exchange of Stock
BUILDING SUPPLIES		
Atlas Plywood Corp.	Plywood, Inc.	Cash
Georgia-Pacific Plywood Co.	C. D. Johnson Lumber Co.	Cash
M. & M. Woodworking Co.	Idanha Veneer Co.	NA
Pacific Coast Aggregates, Inc.	Coche Creek Sand & Gravel Co.	NA
CHEMICALS		
International Minerals & Chemical Corp.	Hoover & Mason Phosphate Co.	Exchange of Stock
Pennsylvania Salt Mfg. Co.	Sharples Chemicals, Inc.	Exchange of Stock
CONSUMER CREDIT AND PERSONAL		
American Investment Co. of Ill.	Domestic Finance Corp.	Exchange of Stock
Pacific Finance Corp.	Contract Purchase Corp.	Exchange of Stock
Seaboard Finance Co.	Employees Credit Corp.	Exchange of Stock
COSMETICS, etc.		
Warner-Hudnut, Inc.	Maltino, Inc.	Exchange of Stock
FARM MACHINERY		
Oliver Corp.	A. B. Farquhar Co.	Exchange of Stock
FOOD		
Chase Candy Co.	Nutrino Candy Co.	Cash
Consolidated Grocers Corp.	Union Sugar Co. of Cal.	Exchange of Stock
International Milling Co.	Eagle Roller Mill Co.	Cash
HOME FURNISHINGS		
Bigelow-Sanford Carpet Co., Inc.	Hartford Rayon Co.	Exchange of Stock
MACHINERY, TOOLS, etc.		
American Machine & Foundry Co.	Sterling Engineering Co.	Exchange of Stock
Aro Equipment Co.	Pyles Industries, Inc.	NA
Bowser, Inc.	Mat'l Scientific Lab., Inc.	Cash
Walworth Co.	J. P. Blair Co.	NA
METALS		
American Smelting & Refining Co.	Frictionless Metals Co.	NA
American Zinc, Lead & Smelting Co.	Nellis B. Mining Co.	NA
OIL		
Midwest Oil Corp.	Mountain Producers Corp.	Exchange of Stock
Wichita River Oil Co.	Midwest Oil Co.	Exchange of Stock
	Saltmound Oil Corp.	Exchange of Stock
	Oil Exploration Co.	Exchange of Stock
PAPER		
Gaylord Container Corp.	Fairfield Paper & Container Corp.	Exchange of Stock
Scott Paper Co.	Oresden Paper Mills	Exchange of Stock
	Soundview Pulp Co.	Exchange of Stock
RADIO, ELECTRONICS		
Avco Mfg. Co.	Brand & Millan, Ltd.	NA
Scott Radio Laboratories, Inc.	John Mack Industries	Exchange of Stock
Trav-Lor Radio Corp.	Telegraph Apparatus Co., Inc.	NA
RAILROAD EQUIPMENT		
New York Air Brake Co.	Hydraulic Equipment Co.	Cash
Westinghouse Air Brake Co.	Aurora Pump Co.	NA
	Melbar, Inc.	NA
RETAILERS		
Federated Department Stores, Inc.	Sanger Bros., Inc.	Exchange of Stock
G. C. Murphy Co.	Morris 5¢, 10¢ & \$1 Stores, Inc.	Exchange of Stock
RUBBER		
Thermoid Co.	Essex Rubber Co.	NA
U.S. Rubber Co.	Mead Aviation Equipment Co.	NA
	Chicago Die & Mold Mfg. Co.	NA
STEEL		
Automatic Steel Products Co.	Metroloy Corp.	NA
Carpenter Steel Co.	Webb Wire Works	Exchange of Stock
Colorado Fuel & Iron Corp.	E. & G. Brooke Iron Co.	Exchange of Stock
Copperweld Steel Co.	Flexo Wire Co.	NA
Pittsburgh Steel Co.	Thomas Steel Co.	Exchange of Stock
TEXTILES		
Riley & Walker Dry Goods Co.	Rockwood Mills	Cash

*Companies actually sold or whose sale appears near consummation.

Bolstered by additional funds, the commission will delve into possible violations of antimonopoly laws.

If you're planning a corporate merger—watch your step.

The Federal Trade Commission is on the warpath. James M. Mead, chairman and former New Deal Senator from New York, is worried over the recent high rate of mergers and consolidations. He scents a yen for monopoly in the trend.

Last week Mead announced that FTC is going to do something about it. He is ready to turn loose an augmented force of lawyers.

• **Tax Factor**—Many close observers of the business scene doubt that the situation is as serious as Mead claims. They say that the spate of mergers has not been caused by monopolistic desires. They see a different set of causes; in the first place come today's high income and inheritance taxes.

But the observers do agree with FTC's chairman on two points: (1) In the past decade mergers have increased sharply and steadily, and (2) the trend has recently turned into a wave of record-smashing size.

FTC statisticians say that some 2,500 mining and manufacturing companies disappeared via mergers or consolidations between 1940 and 1947. By the end of 1947 the pace had been stepped up to a 500-a-year rate. Today, the FTC estimates, corporate marriages are hitting an annual rate of 750.

These figures don't cover several sizable segments of the business population, as FTC points out. They omit banking, a field that has seen a rash of postwar mergers; public utilities are also left out, along with the communication and transportation industries. For all these groups, it has been FTC practice to leave antimonopoly control to other federal agencies.

• **Warning**—In his antimerger blast, Mead didn't indicate whether FTC believed that any, or all, of the recent crop of consolidations by purchase had violated the current provisions of the Clayton Act. His statement sounded more like a warning to executives who are planning mergers to improve their competitive positions.

When the Clayton Act was passed in 1914, it prohibited one company from buying the stock of another, if the deal



The "on-the-wall" test shows why famous Barreled Sunlight is America's outstanding paint value

You have to see it to believe it...

When you compare the price tag of a gallon of Barreled Sunlight with that of a gallon of any other good paint, there really isn't much difference. But, boy oh boy, when you put it on the wall, there is where you see the big advantage in value that you get with Barreled Sunlight.

For example, if you take a gallon of Barreled Sunlight and a gallon of any other good paint and thin each according to directions, you'll see that Barreled Sunlight gives you more paint ready for the brush. Which means, of course, you buy less paint.

But of greater importance, when you see how faster and easier a painter can cover a test area with Barreled Sunlight, you'll realize how much you can save in labor, which represents 80% of the cost of a painting job.

And finally, when you see how much better and brighter it looks after drying you'll be convinced that Barreled Sunlight will give you a better

looking, longer lasting paint job for less money than any other paint.

Let our representative show you how an on-the-wall test can lead to important savings for you. Write and he'll call.

BARRELED SUNLIGHT PAINT COMPANY

1-L Dudley St., Providence, R. I.



Barreled Sunlight

*The Master Painter's
Master Paint*

In whitest white or clean, clear, wanted colors,
there's a Barreled Sunlight Paint for every job

For over half a century the symbol of quality and dependability among paint buyers for leading industrial, institutional and commercial buildings

a message for everyone concerned with critical metals, in and out of government.

are we short of critical metals?



The bright Nickeloid Metal that makes this lure irresistible to a trout or a pickarel should catch the attention of metal-minded executives. The metal is Copperoid (copper-plated zinc)—a gleaming, workable, durable metal which in this and hundreds of other instances has replaced solid copper, thus conserving a metal that is in short supply. And remember, Nickeloid Metals are quality metals!

THE NICKELOID WAY

We save by plating base metals to a non-critical metal.

AMERICAN NICKELOID Company • Peru 11, Illinois

For more information write or phone our nearest office. There's a Nickeloid office in all principal cities.

SHEETS • STRIPS • COILS



Nickel, Chromium, Brass, Copper Finishes Electro-Plated to all Common Base Metals—in Sheets, Coils, Plated One or Two Sides in a Wide Range of Gauges and Tempers.

tended toward monopoly. Mead says that in practice the law was useless because it banned stock purchases, but said nothing about a company's buying the assets of another.

Late in 1950 Congress plugged this hole by an amendment banning buying of assets if the deal set up a monopoly situation. But the stage still wasn't set for any real drive on mergers that FTC might consider illegal. There wasn't enough money to do any adequate policing (BW—Oct. 27 '51, p. 26). All the FTC lawyers could do was prepare office studies of proposed mergers and send out questionnaires on the deals.

• **More Lawyers**—Last month Congress voted enough funds for more decisive activities; FTC is adding 20 lawyers to its antimonopoly division. This will permit plenty of field work on the possible effects of mergers on free competition. Special attention will be given to 1951 mergers.

Even before the new funds were available, FTC had managed to launch investigations of a number of recent mergers. Reports will soon be ready. FTC isn't discussing what the reports may disclose, but it's quite possible that the principals in a few corporate marriages will be called on to do some explaining.

• **Nothing Hasty**—Whatever happens, it won't be because all recent mergers were entered into blindly. There's plenty of evidence that they have been made only on careful advice of counsel. None of the reports is likely to produce earth-shaking antimonopoly results, though there may be more than meets the eye in some of the deals.

Take a look at the sampling of recent mergers on page 124. It shows that few of the really top companies in any industry have been involved as either purchaser or seller. Nor do the deals look as though monopoly had been their goal. Rather, they seem aimed at some such legitimate aims as diversification or widening of a company's production and distribution, or the nailing down of supplies of needed raw materials.

• **Deal Dropped**—To be sure, some mergers that were discussed and later abandoned might have been suspect under existing laws. A year ago a planned merger of Minnesota Mining & Mfg. Co. and Carborundum Co. was called off (BW—Dec. 30 '51, p. 20). The amendment to the Clayton Act had just been passed. W. L. McKnight, chairman of 3-M, said the amended law raised "a serious question of the validity" of the merger.

A similar merger is now on the fire in the auto parts field. Interested parties have approved the union of Thompson Products, Inc., and Muskegon Piston Ring Co. Consummation of the deal is being held up because

of fears of possible repercussions. Both companies claim that counsel says the deal would not violate the antitrust laws. But the managements have decided to study the situation further.

The hesitation is understandable. A company is entirely on its own in such a situation. Under the law, FTC can't say in advance whether or not a merger is legal. Its job is to break up mergers that it finds objectionable after they have been consummated.

• **"Leakage"**—Still, FTC hopes that corporation officials will drop around for a chat while they are considering mergers. It's possible, the commission thinks, that the company men might get just a hint of what the official attitude would be.

Few people think that Mead's anti-merger outburst will have much immediate effect on the consolidation trend. Most analysts say that it would take concrete antitrust actions, not mere threats, to have any effect. That's because there are still so many companies on the prowl for a good buy and so many owners looking for a buyer.

There are good reasons for this active market. Many companies have an eye on a future when cold wars won't be making business so flush as it is now. While they have the money, they want:

• To improve their competitive position in their own field.

• If they are in a feast-or-famine trade, to diversify their operations by getting into some other field through an established portal.

A merger is the quickest way to do the job. More important, it's the cheapest way. Many stocks are currently selling well below their book values. It is quite possible to pick up some bargain packages of plants, competent management, and technical personnel.

As far as the selling companies are concerned, taxes have been a potent influence. And they will continue so for some time. That's particularly true of family-owned or closely held corporations; lately these made up most of the sales.

• **Death Duties**—Many a business owner has long been deeply concerned over the large inheritance taxes that will be levied on his estate. So have the stockholders in prosperous closely held corporations. High federal income taxes add to these worries.

The worries have led to two actions:

• An effort to save on income taxes by cashing in on investments via the capital gains route.

• A quest for greater diversification; the shifting of some wealth into property that can be liquidated readily and used to meet inheritance taxes more easily and cheaply.

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Joseph T. Johnson, that is. He was elected president of the Investment Bankers Assn. of America this week at the group's 40th annual convention in Hollywood, Fla. New securities are his business; flying is his recreation; and cooking is his hobby.

• **BIR to IBA**—Johnson started his career as a T-man. In 1920 the Bureau of Internal Revenue sent him to Milwaukee. Three years later he went into investment banking as manager of the bond department of Milwaukee's Second Ward Securities Co.

One of the founders of The Milwaukee Co. in 1929, he became its president in 1934, a post he still holds. But, for many years, much of his time has been devoted to association affairs.

This has been true particularly since 1948 when the IBA launched its program of telling the public what its members' business is about. In that year, the Public Education Committee was formed, and Johnson was in a fair way to becoming its permanent chairman.

With his elevation to the association's presidency, his job is changed more in emphasis than in character. He will continue to help members tell the public about the securities business and, at the same time, try to broaden greatly the number of people who are shareholders in American industry.

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Pictures from Industry

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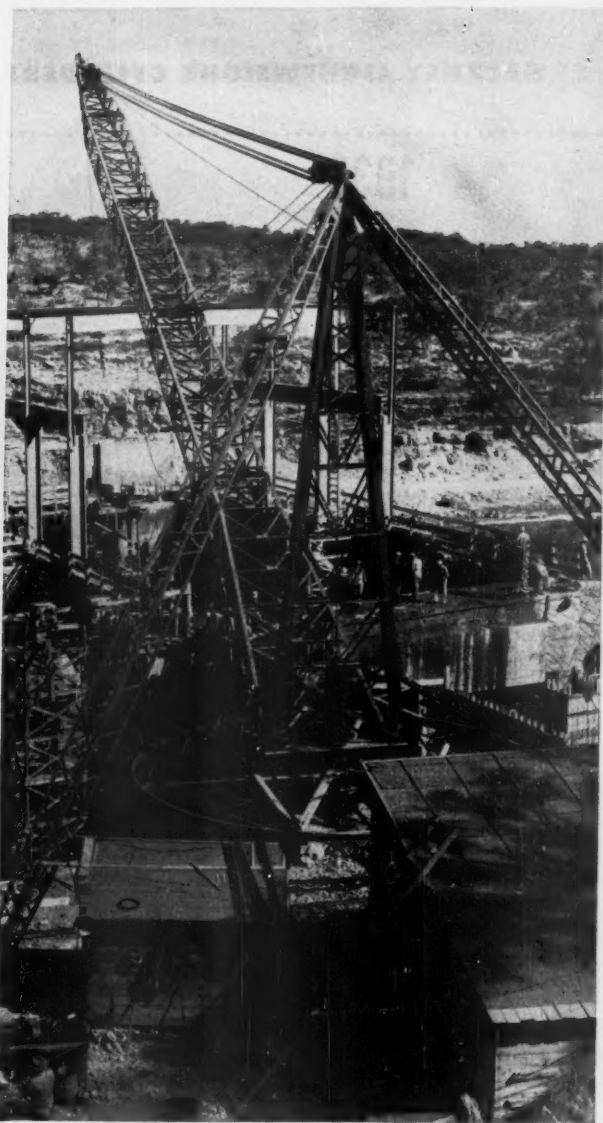


Firemen, save that school! Flaming hot tar, spreading on the roof, brought smoke-eaters on the double, to this new School of Mines building at University of South Dakota. Firemen hopped aboard the contractor's American Portable Material Elevator, rode to roof, quenched flames quickly. Where builders once used clumsy, costly wooden hoisting towers, portable steel Americans now permit fast moves, save enormous expense.



► **Tying down a river.** When the raging Pend Oreille River swept away a new bridge and pile driver, Donovan-James Construction Co. of Seattle decided to lick the currents once and for all. Here, riggers are anchoring the 2½-inch main gut of a highline spanning the river to carry concrete for new Albeni Falls Dam. Tightening nuts on the 2½" drop forged Crosby Clips, these men will bet their lives this connection will hold. Wherever wire rope is used, safety-minded men use Crosby Clips. Recent survey among construction equipment distributors showed a 7-to-1 preference for genuine Crosby Clips; and sales greater than all other wire rope fasteners combined.

► **Identical twin at Marble Falls.** Almost a nation apart, two identical American Stiffleg Derricks are working on major dam projects. Both have the design shown here — a 185-ft. crane type boom, spread mast, and 30-ft. bull-wheel. This one at Marble Falls Dam in Texas, has handled loads up to 35 tons. Its twin is at work at the Detroit Dam, near Salem, Oregon.



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Savings Banks...

... will feel effects of the new income tax. It may lead them to raise dividends, diversify activities.

Savings institutions don't yet have any clear idea of how the new federal income tax will hit them. But from the looks of things, the tax is going to affect savings banks a lot more than it will affect savings and loan outfits. It may soon lead the banks to pay higher dividends to depositors.

The recent tax law extended the income tax (but not excess profits tax) to the earnings of savings banks and savings and loan associations. Not all their earnings are subject to tax, however. They can deduct from earnings:

- (1) Dividends to depositors or shareholders.
- (2) Payments to U.S. or state agencies on loans made before Sept. 1, 1951.
- (3) Additions to reserves for bad debts.

• **Cushion**—The bad-debt reserve provides a cushion that should keep many savings and loan associations, and some savings banks, from paying income tax. If one of these thrift institutions considers its present bad-debt reserve is too small, it can charge certain additions against income and not pay tax on that part of its income. Under the complicated formula provided in the tax law, it can add any amount up to 12% of total deposits or withdrawable accounts, less surplus accounts (surplus, undivided profits, and reserves).

It can take more than this from earnings, if it feels justified on the basis of past loan experience and volume of outstanding loans. But it will have to convince the Bureau of Internal Revenue that the extra deduction is justified.

In any event, the bank or savings and loan society can't add any more than its total net income for the year to its bad-debt reserve, if net profits should happen to be less than the amount that is produced by the 12% formula.

• **No Loophole**—Most savings banks are already in a position where they can't charge very much by way of additional bad-debt reserves against income, and so avoid paying income tax. The national ratio of savings-bank surplus accounts to deposits is about 11.4%, according to the National Assn. of Mutual Savings Banks. That ratio may go up after BIR puts out regulations telling the thrift institutions how they must value assets for tax purposes.

Most savings banks, for instance, value their bank buildings on the bal-



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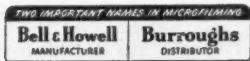


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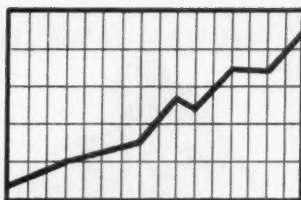
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ance sheet at far below market value. Other assets often are written down, too. That lowers surplus, on the other side of the balance sheet, by the same amount. BIR's regulations will probably have the effect of writing up the assets, hence the surplus accounts, of many banks. That will make it all the less likely that these banks can charge income to their bad-debt reserves.

• **Lower Ratio**—Savings and loan associations, in general, have lower reserves than savings banks. According to the Housing & Home Finance Agency, which gets reports from nearly all the savings and loan outfits, reserves were 8.8% of deposits or withdrawable accounts at the end of last year. The agency figures that about 1,000 of its 6,000 members are at the 12% mark or over. Many of these are small, however.

Savings and loan men explain their lower reserve ratios by pointing out that their associations are younger, and have grown faster, than savings banks. Savings bankers retort that the associations have put growth before safety. They argue that the savings and loan outfits have usually paid higher dividends than savings banks.

At any rate, most savings banks will be subject to income tax unless they pay out more income in dividends. New York savings bankers have already asked the State Banking Board for permission to boost their dividend rates. A ruling is expected early next year.

• **Yes and No**—Dividend increases might not necessarily be in the form of a straight rate increase. A bank might pay "extra" dividends, if earnings justified it, without committing itself to a higher annual rate. And banks might offer an extra rate for thrift money held in the bank for long periods (BW—Sep. 8 '51, p. 134).

Some observers think that a lot of banks won't go along with the rate increases. They may prefer to put some of their earnings into reserves, even if they have to pay taxes to do it, rather than pay more of their earnings out in dividends. That, of course, is assuming that competition from other thrift institutions doesn't get too tough.

The new tax will probably be used by savings bankers as a reason why they should be allowed to enter the commercial banking field. They want to provide the "retail" banking services—such as consumer loans and special checking accounts—that would appeal to their type of customer. Their attitude is that they no longer have a tax advantage over commercial banks, so they should not be handicapped in other ways.

In New York, for instance, savings bankers would like permission to set up more branches. And they want the \$10,000 limit on individual accounts raised or abolished entirely.



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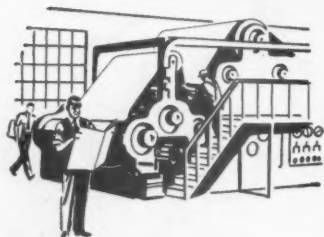
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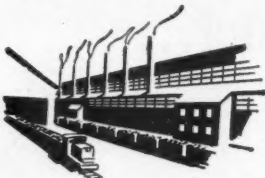
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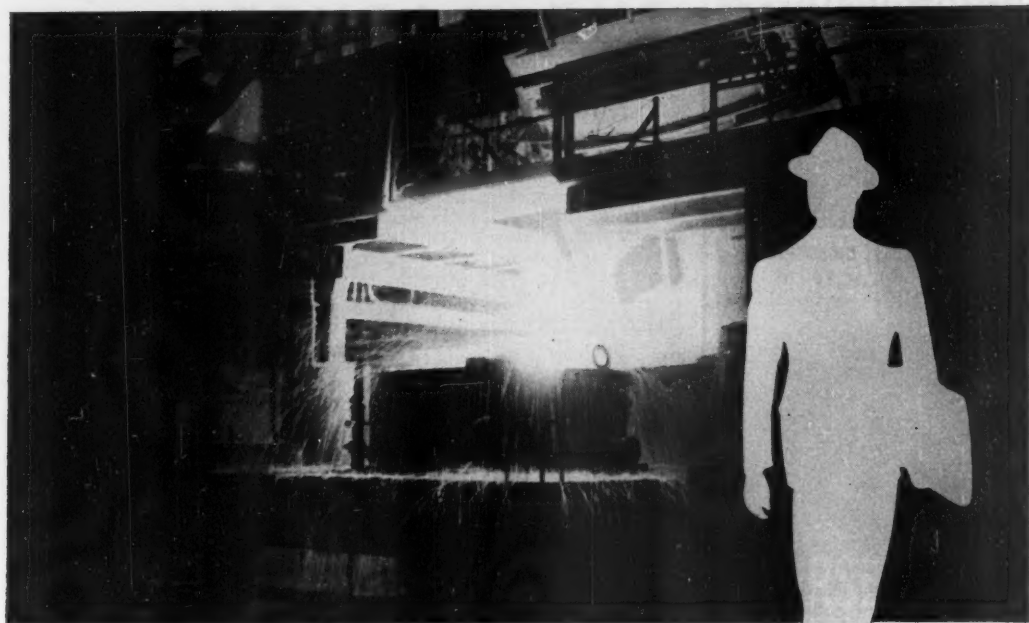
Donald J. Russell, 51, is slated to become the youngest president the Southern Pacific Co. has ever had. He takes over Jan. 1 from Armand T. Mercier, who is nearing the retirement age of 70. Russell has spent all his working years with the Sopac, has been a director since 1943, executive vice-president about a year.

Private security placements through September added up to \$2.6-billion, SEC reports. That's almost as much as the amount sold privately in all 1950. In the first three quarters such sales accounted for 60% of all corporate bond flotations, 47% of all the new stock and bond issues sold.

Failure of Unilever's £14-million issue of 4% debentures has thrown the British bond market into a tizzy. Underwriters were stuck with about 90% of the issue. Some government bonds have gone to new lows, and the stock market is off as well.

Quick killings are still possible in the oil business. Bonanza Oil Co., which less than a year ago brought in its first well (in Wyoming), has just been sold to a group of Texan independents for some \$20-million. Investors originally put up \$120,000, says Bonanza's president, former geology professor Victor Ziegler, whose profit is reported at around \$5-million.

Texas voters this month turned down a proposal to let University of Texas regents invest half of the \$120-million endowment fund in selected stocks and bonds. Fund now can be invested only in government bonds. The regents figured they could increase income some \$1.5-million yearly if corporate issues were added to approved list.



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This Study analyzes the steel industry's improvement in stability and earning power resulting from expanded capacity in an expanded economy, more strategic centers of production, and research . . . describes 8 specific steel stocks.

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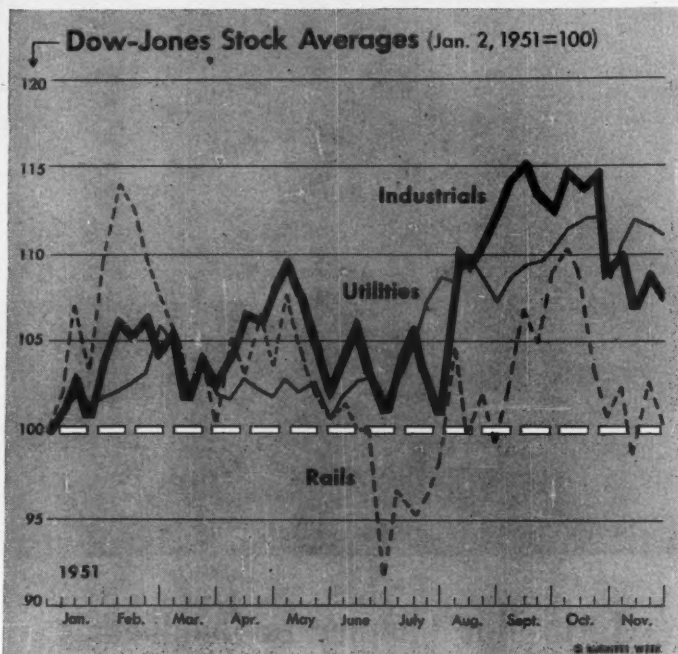
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THE MARKETS



INDUSTRIALS AND RAILS jack-rabbit through 1951, while utilities take steady, tortoise-like course. Year may close with Dow-Jones stock averages showing . . .

Surprise Ending: Utilities on Top

Utilities lagged way behind industrial and rails during the first half of the year. But a second-half spurt has put them ahead of the sagging industrials.

Probably not many analysts would have predicted, back at the start of the year, that the Dow-Jones utility average would end 1951 with a bigger percentage gain than industrial and rails. But it looks as though this might happen (chart).

The slow-moving utility average, which scarcely budged for months, started climbing in July, after the peace talks began in Korea. It went down slightly in September, while the industrial average reached its postwar high, then started up again. Like the other Dow averages, it dipped sharply in the market break late last month. But, unlike the industrials and rails, it recovered most of the ground it lost.

• **A Switch**—It looks as though quite a few of the people who sold industrial shares in the last few weeks have decided to put their money into the utilities, as a hedge against a short-term

correction in the bull market or against a bear market. A switch like that could make sense. Since the utilities lagged way behind the industrials when the market was going up, you might expect them to act better than industrial shares in a market break.

Furthermore, any signs of deflation are good medicine for the utility shares, because deflation would help their earnings. Ever since World War II, the utilities have been caught in a squeeze between rising costs and rising taxes, on one hand, and relatively sticky rates on the other. The rates that utilities charge for their product always move more slowly than their costs.

The industry got one very nice break out of the Revenue Act of 1951. It abolished the 3½% excise tax that utilities have been paying on sales of electricity to commercial and domestic users. That's expected to save the

electric companies about \$50-million a year, partly offsetting the higher income taxes they will have to pay. The industry is already exempt from paying excess profits tax on earnings of less than 6% on invested capital.

• **Appealing**—Although it's expected that the electric companies will earn only about \$785-million in 1951, compared to \$831-million last year, most analysts expect that the utilities will maintain their generous dividend rates. They're pretty much compelled to, since they hope to sell large common and preferred issues to the public, to

finance expansion over the next few years.

That's one reason why utility shares appeal to investors who are interested primarily in income rather than capital gains. Although prices have increased in recent months, high-grade shares are still yielding around 5½%.

Besides all this, there are a couple of bullish signs on the horizon: (1) Many utilities that haven't asked for rate increases in some time are now applying for permission to charge higher rates; (2) estimates are that kwh. sales of electricity will climb 9% in 1952.

Preferreds Hit the Skids

The market has had plenty of new bond and preferred stock issues to digest lately. That, plus the general tightness of money and the weakness of the stock market, is why preferred stock prices are pretty soft now. New high-grade bond issues have been offered at yields from 3.10% to 3.35%. High-grade preferreds have gone as high as 4.60%. That cuts the demand for older bonds and preferreds, whose prices have to fall in line. Last week Standard & Poor's index of preferred stock prices hit the

lowest point since October, 1948.

A good many preferred stocks are still somewhat above their 1951 lows (table). But for preferred stocks in general, the outlook is bearish. A good supply of corporate bond issues is scheduled for offering in the next few months. And institutional investors—whose government-bond holdings were virtually frozen last spring when Federal Reserve pulled the pegs on governments—still don't have any great volume of new funds available for investment.

Preferred Stock Issue	1951 High	Date	1951 Low	Date	% Rally from 1951 Low	
					Recent Price	1951 Low
Allied Stores 4%.....	\$101.00	Feb. 9	\$91.50	July 3	\$95.00	3.8
American Can 7%.....	185.00	Jan. 19	167.50	June 28	170.50	1.8
American Smelting & Refining 7%.....	167.00	Jan. 9	146.00	Nov. 26	146.00
American Tobacco 6%.....	154.00	Jan. 16	134.00	June 14	134.63	0.5
Atchafalpa, Topeka & Santa Fe 5½%.....	57.94	Feb. 8	51.25	Nov. 26	51.25
Atlantic Refining 3¼%.....	105.50	Jan. 17	92.50	June 25	95.00	2.7
Atlas Powder 4%.....	120.00	Sept. 18	109.00	Nov. 13	110.00*	0.9
Bethlehem Steel 7%.....	155.75	Feb. 16	140.50	Nov. 16	140.75	0.2
Bristol-Myers 3¼%.....	105.75	Jan. 17	94.25	May 25	95.50*	1.3
Chesapeake & Ohio 3¼%.....	90.50	Jan. 2	80.00	April 27	82.00	2.5
Colgate-Palmolive-Peet \$3.50.....	100.50	Feb. 5	86.63	Oct. 23	89.38*	3.2
Consolidated G. E. L. & P. 4½%.....	115.00	Feb. 3	104.50	Nov. 16	105.50*	1.0
Consumers Power 4½%.....	113.25	Mar. 2	102.00	Oct. 29	102.75	0.7
Container Corp. 4%.....	106.25	Jan. 16	95.00	Nov. 16	95.50*	0.5
Continental Can \$3.75.....	106.00	Jan. 9	90.50	Oct. 29	94.00	3.9
Corn Products 7%.....	186.00	Jan. 23	166.25	May 17	170.00	2.3
Crown Zellerbach \$4.00.....	106.00	Jan. 31	97.63	Nov. 20	97.75*	0.1
Dow Chemical \$4.....	111.13	Feb. 2	100.00	Nov. 20	100.00*
Eastman Kodak 6%.....	182.00	Jan. 11	160.00	June 29	159.75
Food Machinery 3¼%.....	102.00	Jan. 15	90.00	Nov. 26	90.00
International Harvester 7%.....	179.00	Jan. 31	159.25	June 26	161.75	1.6
Inland Creek Coal \$6.....	139.00	Feb. 7	129.00	July 12	133.50*	3.5
Liggett & Myers Tobacco 7%.....	184.00	Jan. 23	159.00	Nov. 14	159.00
May Dept. Stores 3¼%.....	101.50	Feb. 21	87.00	June 29	90.50*	4.0
Merck & Co. 3¼%.....	101.00	Jan. 12	88.50	April 10	88.00*
National Biscuit 7%.....	184.75	Jan. 20	163.00	Nov. 14	163.25	0.2
National Lead 7%.....	185.50	Jan. 4	169.00	June 29	171.50	1.5
R. J. Reynolds Tobacco 3.60%.....	98.50	Jan. 23	84.00	Nov. 15	83.75*
E. R. Squibb \$4.....	109.25	Jan. 30	98.75	Nov. 21	99.50	0.8
Standard Brands \$3.50.....	90.00	Mar. 1	79.75	Nov. 23	81.00	1.6
Sylvania Electric Products \$4.....	95.50	Mar. 1	84.00	Nov. 23	82.75*
Union Pacific \$2.....	52.00	Feb. 2	46.75	Oct. 11	48.00	2.7
U. S. Gypsum 7%.....	185.00	Jan. 26	168.00	Oct. 30	169.00	0.6
U. S. Rubber 8%.....	151.00	Oct. 6	128.75	July 2	136.75	6.2
U. S. Steel 7%.....	153.75	Jan. 19	139.50	Nov. 23	140.00	0.4

* Bid price. † Adjusted for stock split.

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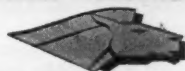
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DEFENSE BUSINESS

Should You Give More Than You've Got?

● Yes, says CMP, which assigns more steel, copper, and aluminum than the entire supply. Its reason: A good 10% of the allotments will never be claimed.

● Business and some government agencies are skeptical. They say that if you give four slices of pie to five boys you'll have a fight on your hands.

● Result of the controversy: CMP will continue to over-allot, but by a smaller margin than in the past.

The government's controls experts finally are learning something any housewife could tell them: When you give five boys four slices of pie, you start a fight.

Until now that's about the way controls officials have been parceling out steel, copper, and aluminum to U.S. industry. They've been inviting hard goods manufacturers to use up metal in quantities that add up to more than total supply.

• **Scramble**—The result has been a confused scrambling among businessmen trying to cash the allotment "tickets" the government gave them for metal. The hue and cry from those who found no supplier willing or able to do the cashing has forced the controllers to back away a little from this method of splitting the metals pie.

They won't abandon over-allotment completely. They feel they must hand out tickets for something over 100% of supply to make certain that all available raw metal is used. They know that not all tickets are cashed, especially those issued for military production. Between the time a manufacturer applies for an allotment and the period in which he plans to use it, he may find he doesn't need it for one of a variety of reasons.

• **Experience**—During World War II, the War Production Board found this failure to cash metals tickets—which it christened "attrition"—occurred unfailingly and ran to something over 10% of total allotments. The Defense Production Administration, heir to WPB's materials controls, accepted its predecessor's solution for attrition—over-allotment.

Last July, when DPA adopted the Controlled Materials Plan, another hand-me-down from WPB, it incorporated over-allotment into the system in the same manner. Quarter by quarter,

hard goods producers report to DPA their estimated needs for steel, copper, and aluminum. DPA scales down these estimates to make them match total supply, plus its own estimate of total attrition.

• **Scaling Down**—DPA officials insist that failures by industry to find metal to match allotments have been due more to other factors than to over-allotment. Nonetheless, they have been scaling down their estimates of attrition. For example, they have allotted an average of less than 112% of total supply of the various primary shapes and forms of the three metals for the first quarter of next year. Their average allotments for the fourth quarter of this year ran over 113%.

For the second quarter of 1952, for which DPA is now preparing CMP allotments, the average will go down to 107% or 108% for each metal. It may well go lower in subsequent quarters, perhaps to 105%, as compared to the World War II low of about 110%.

DPA's uncertainty stems primarily from its lack of experience with CMP. During the third quarter of this year, the first under CMP, only a portion of hard goods production was under the allotment system. Other producers had to rely on the old DO-priorities or got no assistance at all from government in obtaining metals.

• **More Guesses**—The controllers won't know exactly how badly—if at all—they missed their guesses on attrition until the fourth quarter has ended. Meanwhile, they must continue to guess, since CMP allotments must be made well in advance.

They have made a quick check with some 2,000 manufacturers, which they hope will guide them in guessing at second-quarter attrition. But the results of this survey still aren't in. Meanwhile, the DPA experts are fighting a

sort of delaying action against critics—representatives of some other government agencies as well as businessmen—who claim over-allotments aren't working and never will.

• **Old Customers**—Without specific data, the critics' case against over-allotment is tough to refute. In a nutshell, it runs something like this:

Under government regulations, metals suppliers must fill allotments of the armed forces and the Atomic Energy Commission first. Certain other orders—such as tools or components for military production—also are specified by DPA for preferential treatment. Then steel mills are permitted to give preferential handling to orders from traditional customers. That means that big users, like auto and appliance makers, get their full metals allotments.

DPA's critics charge that leaves a lot of people at the low end of the supply line. Thus, a small business or even some rather essential civilian producer might be frozen out if all metal users with preferential status took their full allotments.

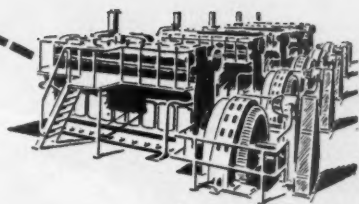
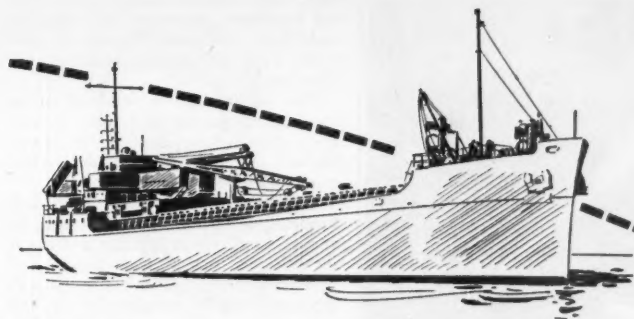
DPA answers that attrition is a very real thing. It already has received some tickets back from producers of military items who were unable to use some of their metal. Other producers will be doing the same thing before the fourth quarter is over, agency spokesmen predict.

• **Hanging On**—Trouble is, they insist, that manufacturers are reluctant to turn loose any metal to which they are entitled by an allotment. But they'll have to cough up at the end of the quarter or face the risk of prosecution.

Beyond the general confusion in many industry quarters, which DPA attributes to lack of familiarity with CMP regulations, agency spokesmen cite specific reasons for snarls in the supply of each of the CMP metals:

• **Steel**—Fears of a wage increase in the steel industry, followed by a price jump, have impelled some manufacturers to pile up inventories beyond the limits of DPA ceilings. In some cases this has been done in ignorance of inventory regulations. The controllers plan to break up the practice. They expect it will die a natural death anyhow when steel wages are settled.

In addition, warehouses, which traditionally have handled about 18% of the steel shipped, have lost a lot of old customers. This, despite the fact that warehouses are getting allotments equal to pre-Korea supplies. For reasons of

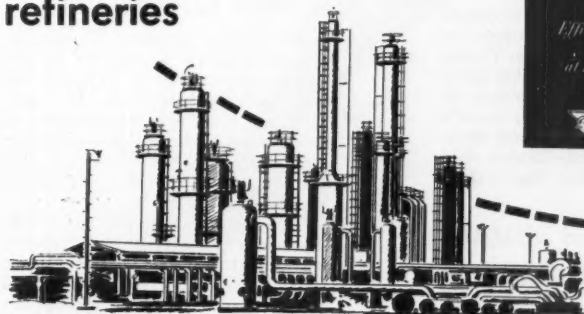


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Loon Lake bridge in Douglas county, Oregon

modern bridge shows today's construction advantages of wood

For speed of construction and economy, it's hard to match modern timber engineering techniques used recently to build the rugged Loon Lake bridge shown above. Wood, glue-laminated for strength and pressure-treated for durability, was used with ingenious timber connectors to make the arches, struts, beams and deck. With wood's natural resistance to rust, corrosion, crumbling and spalling, Loon Lake now has a long-lasting, sturdy bridge able to withstand the daily pounding of heavy, fast traffic.

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their own, probably largely price, the old warehouse customers are trying to cash their allotments directly at steel mills. This puts an added squeeze on other users.

The government is working on a regulation requiring steel users to buy from historic suppliers. DPA hopes this will send old customers back to the warehouses.

Copper—For both the third and fourth quarters, DPA's allotments of copper, made up in advance and based on estimated supply, were thrown out of kilter by strikes. The losses in supply were made up by withdrawals from the national security stockpile, but this took time.

Aluminum—The big new demand for aluminum comes from the military, mostly for aircraft. At least a part of the trouble here is a lack of special fabricating facilities—chiefly extruding and plating equipment. There was no nonmilitary use for such facilities, so we never built them.

Defense Housing Gets A New Coordinator

Mobilization director Charles E. Wilson added an assistant for defense housing and community facilities to his small policy-making staff this week. Raymond M. Foley, administrator of the Housing & Home Finance Agency, is the new man. His appointment plugs a hole in Wilson's Office of Defense Mobilization.

Nothing revolutionary is indicated by the change. It merely pulls together the loose strands of a defense housing fabric. Until now, Wilson had received advice from separate sources on the certifying of critical defense housing areas, on programming of needed housing units, and on rent control. Hereafter, Foley will ride herd on all three.

• **Defense Areas**—Faster, smoother operation should result. Up to the weekend, Wilson had certified 96 areas as critical, on the recommendation of an advisory committee in the Defense Production Administration. The Housing & Home Finance Agency had suspended credit controls for 53,440 housing units in 78 of those areas. And in 56 areas, the Office of Rent Stabilization had imposed rent controls.

New areas are being certified at a rate of six to 10 a week. Certification will continue at that speed for another month or two. But the total number of areas designated won't run up to the 400 certified for special aids in the last war. Nor will the number of programmed housing units reach the total of 225,000 by June 30 that HHFA talked about in presenting its estimates to Congress this year.



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see Clues on page 154

Renegotiators Get a Break

Figuring renegotiable contracts will be easier for manufacturers doing business with both military and civilian agencies. New rulings spell out what they can exempt.

Last week the Renegotiation Board issued two regulations aimed to help clear up the muddle of profits-recapture on government contracts. The first regulation exempted certain stock items from renegotiation computations. The second attempted to clarify some of the provisions of the Renegotiation Act of 1951, which replaced the miscellany of laws that governed renegotiation of business done before this year.

I. Exemptions

In general, all defense contracts or subcontracts are subject to renegotiation—provided they total more than \$250,000 a year. But there are some important exceptions. Under the law, contracts to supply raw materials and agricultural products are exempt. And under the regulation issued last week, this exemption is extended to include a common type of subcontract:

If you sell to a manufacturer doing business with both military and civilian agencies and accustomed to buying items for stock (like nuts, bolts, and screws), then such sales to him are not renegotiable. Reason is that the board figures it would take too much figuring to determine how much of this stock went into defense contracts and how

much of it into civilian production.

But you will be subject to renegotiation in the following cases:

- If the manufacturer buys these stock items according to set defense specifications for a specific contract.

- If he segregates the item, in whole or part, for assignment to a renegotiable contract.

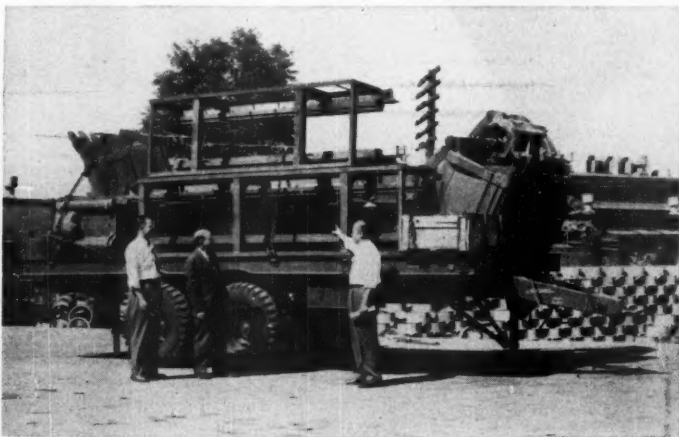
- If he used a DO rating or represents to you that the stock item will be used for a defense contract.

- If the amount he purchases coincides substantially with his estimates for the same item in a defense contract or is different from his usual requirements.

Unless one of these points applies, you don't have to include sales of stock items in the total of your renegotiable business—even though you know some of the stock will go into defense contracts.

II. Procedure

The other order paves the way for renegotiation procedure. It points out what contracts are subject to the Renegotiation Act of 1951, and it tells you how to determine which receipts are subject to renegotiation. But it doesn't apply to brokers and other contractors



Trailer Carries 15 Tons of Army Tools

The Trailmobile Co. of Cincinnati has the green light for production of this special trailer for the Army Engineers. A pilot model passed tests, and a \$2-million pro-

duction contract was awarded. The trailers will be used to tote up to 15 tons of crane-shovel attachments to military projects. They can be towed by standard Army trucks.

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PEOPLE have already proved that they like stainless steel table service. It's used in millions of homes and restaurants. And now there's fresh reason for even greater popularity. A number of makers have launched new designs in stainless steel, both flatware and hollowware, which rival the finest heirloom-quality table service in beauty of line and styling. But—with what a difference in practicality and usefulness!

You don't have to store your stainless service away in tarnish-proof chests. Its hard surface laughs at wear and tear, doesn't tarnish, never needs polishing. Just ordinary soap-and-water-after-use keeps it permanently bright and lovely. You can enjoy its beauty on your table every day, not just on special occasions.

It is exactly these qualities—the greatest combination of strength and resistance to corrosion, heat and wear to be found in any metal commercially available today—that have made stainless steel a vital material for so many essential uses. Not only wherever food is concerned, but throughout the process industries and in hospitals, aircraft, marine use—*everywhere!* That's why we have multiplied our production of Allegheny Metal time and again, and are continuing to spend millions of dollars for further expansion. It is also why we offer every assistance to fabricators to make the best possible use of every pound.

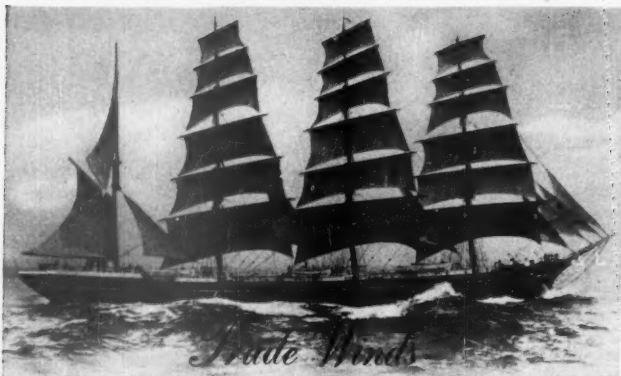
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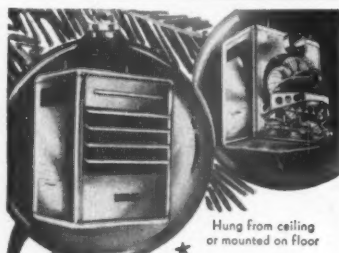
In 1792, when James Drake founded his mercantile company in Cuba, international trade faced the many hazards of nature. Today's man-made hazards are different, but far more complex — with names like "import license", "currency restriction" and "sight draft". The requirements of overseas markets today are constantly changing, too, so that export, more than ever, needs the **SERVICE of SPECIALISTS**.



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who come under Section 103 (G) (3) of the act.

• **Effective Dates**—The Renegotiation Act applies to all nonexempt prime contracts and subcontracts with the following departments, to the extent of all amounts received on and after the dates indicated:

Jan. 1, 1951: Prime contracts with Defense, Army, Navy, Air Force, Commerce, General Services Administration, Atomic Energy Commission, Reconstruction Finance Corp., Panama Canal Zone Government, Panama Canal Co., and Housing & Home Finance Agency.

July 1, 1951: Contracts with Federal Civil Defense, National Advisory Committee for Aeronautics, TVA, and the Coast Guard.

Oct. 1, 1951: Bureau of Mines and Geological Survey.

Nov. 1, 1951: Bonneville Power Administration.

III. Scratch Pad Work

First step in determining your negotiable profits is to total all accruals on contracts with the defense agencies on or after the effective date. If you're a subcontractor, check with your customers to find out how much of the goods you sold them are being used for government contracts. For example, suppose you've sold a special-type brake to a truck maker who also is an Army contractor. You find out that all his trucks use this brake. But only 30% go to the Army. So you can assume that only 30% of your brake sales are negotiable.

If, as a subcontractor, you supply many customers in the same industry who produce the same type product, then you can assume your negotiable business to be in the same ratio as the industry's sales to the government. You can use government or trade association reports as a basis for figuring percentages, and your figures can be in terms of dollars, units, or percentages. If you can't get reasonably accurate figures from these sources, you have to list each negotiable contract.

• **Check Your Contract**—Your contract will usually tell you whether your subcontract is negotiable. But even if it isn't spelled out, it may be negotiable—or it may not. Perhaps your subcontract was exempted after the renegotiation clause or reference was added. Some prime contractors make it a general rule to include a renegotiation clause in all subcontracts, even if these aren't subject to the act.

Best way is to check the subcontract number against the prime contract to see if it relates to one of the listed departments. Also check to see if the subcontract has a CMP allotment number of a DO rating issued by any one

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WITH FEWER ASSEMBLY OPERATIONS
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But—unless your dust collecting system is designed to the individual requirements of your plant, much of these potential benefits stand to go up the stack.

As a result, a Buell Engineer is a good man to know. Buell's staff of industrial 'dust' men draw on more than 200 man-years of experience in the design and construction of high-efficiency, trouble-free Dust Collection Systems. They can discuss the success of hundreds of Buell Installations, and how one can be designed for you.

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of the listed government departments. If you're still not sure, write the Renegotiation Board, 726 General Services Administration Bldg., Washington 25, D. C.

• **Etiquette**—Burden of getting information regarding the end-use of his product rests with the subcontractor. He has to ask his prime, and the prime is required to give him the information. But the subcontractor isn't compelled to ask anything that he wouldn't ordinarily ask of any businessman. And the subcontractor isn't required to make inquiries of any customer with whom he did less than \$2,500 of business during his fiscal year. And he isn't required to make inquiries of any customer who obviously isn't supplying materials to any of the listed departments, directly or through subcontracts.

CHECKLIST:

Defense Regulations

The following listing and condensed description cover all the materials and price-control regulations issued by the defense agencies during the preceding week.

Full texts of the materials orders may be obtained from National Production Authority, Washington 25, or from any Dept. of Commerce regional office.

Full texts of the price orders may be had from the Office of Price Stabilization, Washington 25, or from the regional OPS office in your area.

Materials Orders

Color television: Prohibits the manufacture of color television sets and other items, such as color attachments for black-and-white sets, designed solely to permit or facilitate reception of color TV. This does not affect the manufacture of such equipment for experimental, defense, or industrial uses. M-90 (Nov. 20).

Zinc: Reduces from 20 tons to 10 tons the amount of slab zinc that can be purchased in any month without an allocation certificate, to become effective Jan. 1, 1952. M-9, Amdt. 1 (Nov. 23).

Solid fuels: Delegates authority to the Secretary of Interior to administer NPA Order M-87, which provides special assistance for solid fuels producers to obtain maintenance, repair, and operating supplies and capital additions. Del. 15 (Nov. 20).

Controlled materials: Amends CMP Reg. 1 by incorporating all previous amendments in a consolidated regulation as well as adding new changes and interpretations made necessary by

BUSINESS IN MOTION

To our Colleagues in American Business...

Specifications of raw or semi-manufactured materials often present problems. These arise frequently when engineers and designers feel that their ideas can only be carried out in a highly special way. Sometimes this is the case, of course. But Revere very often finds that many "specials" are not really necessary, and that proper selection will make standard items not only perfectly suitable in every respect, but will avoid delivery delays and price premiums and reduce stockroom complications.

A recent case involved a company making aluminum building products, such as louvred window shutters, attic ventilators, mail boxes, roof ventilators, and so on. The company is modern, aggressive, and capably staffed in engineering, design, purchasing and production departments, as well as sales. Revere as a producer of aluminum coiled sheet was given the opportunity to make a thorough study of factory methods and end uses, and their relationship to specifications. This collaboration developed the fact that it should be unnecessary to specify more than one aluminum alloy, which seemed to have everything the manufacturer needed in strength, workability and beauty. As a result of Revere's well-documented recommendations, a trial order of this alloy was entered.

When the material was put through the factory on a production basis, it surpassed expectations. The chief engineer and the purchasing department thereupon changed all their specifications to conform with those set up by Revere. As a result, Revere has been

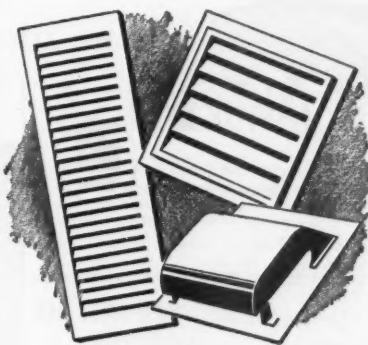
receiving a good part of the company's business.

This case is cited not merely because it illustrates a fine way to get orders. What is really important about it is the evidence it provides of the value of team work. In Revere, the team works this way: a capable salesman calls on a prospect, and asks for the opportunity to do more than solicit an order. The Technical Advisory staff, if permitted, applies its knowledge, skill and ingenuity in overcoming problems and setting up specifications in collaboration with the prospect. Once an order is received, the

capable mill employees, including methods and production departments, set up proper mill and shipping procedures, and carry through the order with careful efficiency. Team work of this kind has contributed mightily to create Revere's outstanding position. However, it should not be overlooked that in this description of the team, the customer is included. He very definitely belongs. You might say he is the catcher, plus an infielder or two and a couple

of outfielders, while the rest of the home team, including the pitcher, is Revere. The guy at bat is the problem and is struck out.

Many customers tell us we play that kind of ball exceedingly well, and we are proud of that. However, there are other companies, in every league, who do likewise. So Revere suggests that no matter what it is you buy, nor from whom, whether it be glass or plastics, steel or fabrics, you join your suppliers' teams. The improvement in the score may surprise you considerably.



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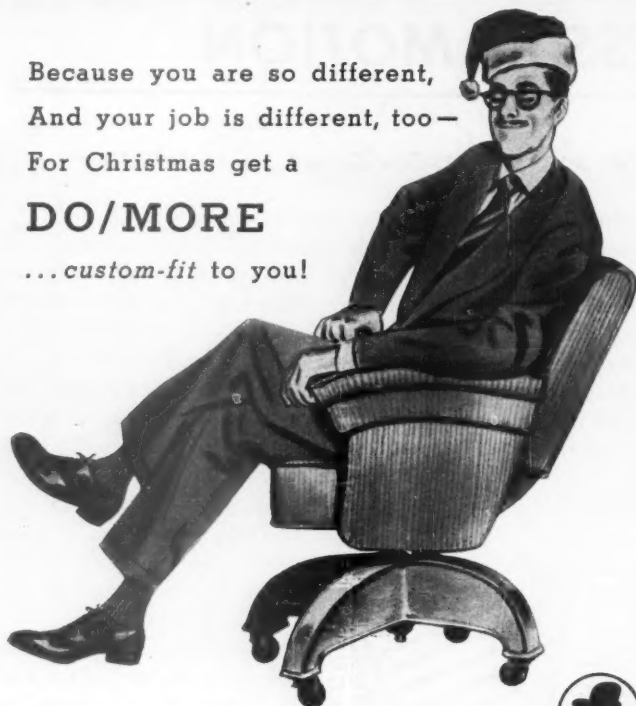
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Pricing Orders

Pacific Northwest logs: Issues dollars-and-cents ceilings for all standard grades of logs produced from nine major species of trees in the Pacific Northwest. CPR 97 (Nov. 24).

New passenger automobiles: Permits manufacturers to include increases in the federal excise tax in establishing ceiling prices for extra, special, or optional equipment, even when the tax is not separately stated. CPR 1, Rev. 1, Amdt. 1 (eff. Nov. 1).

Wholesale pork: Permits wholesalers who prior to Oct. 1, 1951, prepared certain pork cuts that are not in conformity with cuts specified in CPR 74 to dispose of such cuts at the old ceilings established under GCPR. CPR 74, Amdt. 1 (eff. Nov. 24).

Natural and distilled water: Exempts from price control all sales of natural and distilled water that is neither flavored nor carbonated. GOR 7, Amdt. 7 (eff. Nov. 24).

Petroleum products in Boston: Sets specific ceiling prices in cents per gal. for certain petroleum products in the Greater Boston area. CPR 17, Reg. 4 (eff. Nov. 26).

Pricing commodities in new categories: Permits a manufacturer to use the ceiling price of a competitor of the same class for the same or substantially similar commodity sold to the same class of purchaser. GCPR, Amdt. 24; CPR 22, Amdt. 34 (eff. Nov. 26).

Scrap rubber: Provides that under no circumstances shall the ceiling on GR-S synthetic tube scrap in the Los Angeles area be less than $\frac{1}{4}$ ¢ per lb. CPR 59, Amdt. 2 (eff. Nov. 26).

Kenaf fiber: Exempts from price control all sales of Kenaf fiber, which is used as a jute substitute in manufacture of burlap. GOR 4, Amdt. 3 (eff. Nov. 26).

Sausage: Revises ceiling prices for manufacturers of fresh and semidry sausage containing beef to permit processors to reflect recent increase in wholesale beef ceilings. Also permits sausage makers who sell products in sheep casings to adjust ceiling to reflect higher cost of casings. GCPR, SR 34 (eff. Nov. 26).

Packard automobiles: Establishes new dollars-and-cents "basic" price for Packard passenger cars and for extra, special, or optional equipment for these automobiles when sold at retail and wholesale. CPR 83, Sec. 2, Spec. Order 1 (eff. Nov. 24).

Capehart adjustments: Provides a method by which manufacturers who apply for Capehart adjustments can calculate an overhead cost adjustment



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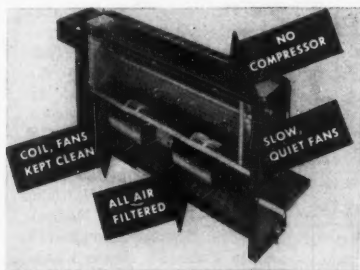


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It's General Electric Personal Weather Control, which heats in winter and cools in summer...utilizing individual G-E room air conditioners supplied with hot or chilled water through simple pipe runs from a central heating and refrigeration plant.

HOW YOU SAVE...Valuable space can be saved and alterations can be avoided by supplying ventilation through small-size ducts, the method used in the new Dun & Bradstreet Building (above) in New York City. Installation costs can be reduced even further by installing these systems with no ducts at all...using wall apertures for fresh air.

G-E Personal Weather Control often requires substantially less compressor

capacity, saving both installed and operating cost. When rooms are unoccupied, units can be shut off. When there are few people in the building or the system is being started in the morning, units can be operated without the expense of running ventilation equipment.

MAKES YOUR BUILDING MORE PROFITABLE...Tenants enjoy living or working in buildings air conditioned by G-E Personal Weather Control. Each tenant can set the temperature of his room without disturbing others. And it's easier to rearrange office space, because G-E room units are flexible.

It's no wonder that G-E Personal Weather Control Air Conditioning is installed in Houston's Sterling Building...12 Sheraton Hotels...the prominent new 575 Madison Avenue Building in New York City...and other leading buildings all over the United States.

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IN ALL
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CITIES

factor. CPR 22, SR 2, Rev. 1 (eff. Nov. 26).

Bakery products: Permits bakers caught in a price squeeze to compute alternative ceiling prices by multiplying average prices for any three-month period in 1949 by the factor 1.11, which represents cost increases since 1949. GCPR, SR 80 (eff. Nov. 26).

DEFENSE BUSINESS BRIEFS

New aluminum combine of Anaconda Copper Co. and Harvey Machine Co. (BW—Nov. 10 '51, p20) can't have Harvey's contract for Bonneville power, if Interior Secretary Chapman has his way. Chapman barred transferring of the power contract, charging it might promote monopoly. But DPA still hopes to effect the transfer by getting clearance from other agencies.

Can makers, the biggest users of tin, have attacked the government's refusal to buy the metal at world prices. They said that RFC, the sole authorized buyer, should pay whatever price is necessary to get adequate supplies. Resulting price rise would be small, they argue, because world tin production exceeds demand.

Boss mobilizer Charles E. Wilson will have the fight for fast tax amortization for taconite processing plants dumped in his lap. DMPA, Wilson's new minerals expansion agency, says other mobilization agencies have been dragging their feet, blocking action for months.

Sulfur producers warned NPA that their production next year is likely to lag behind present rates. They estimated 1952 production at 5-million long tons, compared with the current rate of 5,311,438 tons.

The Pictures—Cover by Simon Nathan. Armco Steel Corp.—70; Fabian Bachrach—121; Henry Doody, Black Star—30 (top lt.); Albert Pione, Black Star—44, 45; Cal-Pictures—94, 95; Chartmakers, Inc.—62; Harris & Ewing—19, 22; Jerome Holtkamp—136; Int. News—152 (lt., ctr.); Bob Iscar—86; Keystone—24, 149; John Meredith—128; Simon Nathan—72, 75; Newman-Schmidt—114; Alfred Puhn—58; Three Lions—30 (top ctr., bot.); Wide World—152 (rt.); Dick Wolters—30 (top rt.).

INTERNATIONAL OUTLOOK

BUSINESS WEEK
DECEMBER 1, 1951



The U. S. is working at cross purposes in Western Europe. At any rate, that's the way things looked as the NATO meeting ended in Rome this week.

On the one hand, Eisenhower pleaded for a bigger military buildup. To smooth the way for this, U. S. officials have been telling European leaders recently that we would send more financial aid. Faster delivery of U. S. arms was promised, too.

Then Treasury Secretary Snyder told the Europeans at Rome: "Nothing doing. You can't expect extra U. S. financial aid during fiscal 1952." Meanwhile, Europeans got wind of this: The Pentagon isn't keen about speeding arms shipments; it might create shortages here.

Apparently, Eisenhower's speedup plan isn't based on any evidence that the Russians are getting set to attack next year.

But as the general sees it, there's bound to be some danger when West Germany starts to raise forces for his NATO army. And that critical time will come before mid-1952.

According to Eisenhower, the Russians are more afraid of German rearmament than of U. S. A-bombs. Thus there's a possibility that Moscow would attack before German rearmament becomes a reality.

It's hard to see how Western Europe can meet Eisenhower's demands without more U. S. aid. Here's the situation:

The European countries must find an extra \$7-billion next year—\$3-billion more for arms, \$3-billion more for exports, and \$1-billion to offset the planned drop in U. S. economic aid.

That \$7-billion has to come out of a group of economies whose total production is \$175-billion a year. Of this, about \$35-billion goes for capital investment and a like amount for government activities. That leaves \$100-billion for consumption.

Since there's little chance of cutting either capital investment or government spending, the extra \$7-billion must come out of consumption or out of higher production. But production is bumping against a ceiling already. That means living standards must take the rap. And politically, that would be hard to put across in Western Europe today.

Now that the cease-fire line is fixed, the first hurdle in Korean truce talks has been taken. But there are several high ones still ahead:

Inspection. The U. S. wants freedom for inspection teams to roam all over Korea, even to the Yalu. The Reds want inspection only in the truce line area. The U. S. probably will compromise. But we are sure to hold out for at least Korea-wide air patrols.

War prisoners. Here, the U. S. has a strong bargaining position. We have about 10 times as many prisoners as the Reds. So we'll start by offering an equal exchange.

South Korea's army. The U. S. has announced its plans to strengthen this fighting force. The Communists will say that this is the kind of "buildup" that's prohibited by the cease-fire agreement.

When it comes to a political settlement in Korea, you can be sure that Mao Tse-Tung wants at least these two things:

- (1) Withdrawal of U. S. fleet protection from Formosa.
- (2) A friendly government in South Korea. (Mao might settle for a

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

DECEMBER 1, 1951

temporary four-power occupation of the whole country—China, Russia, U. S., and probably Japan.)

Despite heavy Chinese losses, Mao can figure that Korea already has paid these handsome dividends:

Proof that Chinese troops can resist Western armies.

Easier control of the Chinese countryside, because of Communist military prestige.

A chance to kill off his enemies. The armed opposition has been lured into the open by the war, giving Mao the opportunity to kill it.

Moscow's big dividend in Korea is the strengthening of China as a military power. In Stalin's mind, that may offset the arms buildup stimulated in the U. S.

The Plevin government is pushing Churchill to visit Paris before Washington.

The French want to prevent any special U. S.-British ties, draw Britain closer to the continent instead.

Whether it's Washington or Paris first, Churchill will push Truman for:

(1) A British veto on when and how the U. S. can use its airbases in Britain.

(2) A revived atomic partnership between the U. S., Britain, and Canada.

(3) Closer consultation on all important foreign policy matters.

Western Europe has plans for a further big boost in oil refining capacity.

Italy, for example, wants to jump its output from 7-million tons a year to 15-million. Fuel oil production would go up from 150,000 tons a year to 700,000 tons.

All the new refineries are slated to use crude from the Middle East, which makes that area all the more vital to the West.

Canada's roaring oil boom is surprising even the optimists.

Estimates of reserves have skyrocketed to 1.7-billion bbl., up 55% in a year. And Alberta's natural gas reserves are up to 11-trillion cu. ft.; a few months ago the "safe" estimate was 8-trillion.

Pacific Petroleum, Ltd., has struck oil in British Columbia. It's the first discovery there.

Imperial Oil Co., a Standard Oil Co. (N. J.) affiliate and Canada's largest producer, has announced a whopping expansion and exploration program—\$120-million. Half of it is for acreage and new wells.

An Edmonton to Vancouver oil pipeline, costing \$80-million, is in the works. Trans Mountain Pipe Line Co., owned by Imperial, Socony Vacuum, Gulf, and Bechtel Corp., will build it for completion early in 1954.

Not everyone is cheering over George Kennan's upcoming appointment as Ambassador to the U.S.S.R. (page 152).

Some Kremlin-wise observers think his talents as an anti-Communist policy planner will be wasted in the restricted, goldfish-bowl orbit of Moscow's diplomatic colony. Also, Kennan's mission could be hindered by the fact that his views on the Soviet Union are on the record in speeches and articles.

BUSINESS ABROAD



FRENCH LEADERS, Premier Pleven, left, and Foreign Minister Schuman, are heading into political and economic tempests. It's . . .

The Last Chance for Middle of Roaders

Why France is on verge of a crackup that could wreck European defense.

Last week U.S. officials in Paris got a blunt warning from Premier Pleven and Foreign Minister Schuman: Get started with your economic aid program soon, or we'll have a crisis in France that will wreck the defense effort of all Western Europe.

The warning had a familiar ring. The current French crisis, like others before it, is compounded of both economic and political troubles: (1) domestic inflation, plus a temporary dollar shortage, has to be dealt with by (2) a politically unstable government.

There's no doubt about inflation in France—it's serious. Wholesale prices have gone up 40% since Korea; that's far more than in any other Marshall Plan country. Continued inflation—and there's no end in sight—could force a profitless devaluation of the franc, halt France's already flagging defense effort, put Pleven's middle-of-the-road government out of office.

Because it's politically weak, the Pleven government has never risked a really firm anti-inflation policy. Pleven has only a minority of the National

Assembly safely behind him. Against attacks from the Gaullist right and the Communist left, he has to depend on the unreliable support of the Socialists, who refuse to join his cabinet.

• **Homegrown Crisis**—The French crisis, like Britain's, has been up for a long time. It had its roots in the raw materials price boom that followed Korea. That stimulated the domestic inflation spiral and also widened France's dollar gap. In combination, these stirred up a wave of speculation against the franc that has driven France's currency to the lowest open market quotations since early 1949—about 450 francs to the dollar, against the official rate of 350.

Unlike Britain, France can't claim that its crisis results in any large degree from rearmament efforts. French war production, except for ammunition and soft goods items such as uniforms, is hardly past prototype stage.

In part at least, French inflation was brought on by official government policy. Just before Korea, agricultural prices were dropping in France. For political reasons the government propped them up. Rising prices for public serv-

ices have also been a big factor in the current inflation. To keep nationalized public utilities out of the red, the government has jacked up their prices as much as 50% and 60%.

• **Vanishing Dollars**—On the dollar shortage front, the crisis has been aggravated this year by two unexpected developments:

• Britain and Germany failed to produce adequate supplies of export coal. This has forced France to spend heavily in the U.S. for coal supplies.

• France has received virtually no American aid since July, due to the shiftover from ECA to the Mutual Security Administration. This lapse hit France just when it could have used dollars most advantageously.

In desperation, Finance Minister Rene Mayer announced plans to cut dollar imports over the next year from the planned level of \$825-million to a new level of \$500-million.

• **Inflationary Saving**—Economic experts agree that if this cut is actually carried out it would spell disaster for the French economy.

The Mayer cut in imports of raw materials would inevitably reduce production, give inflation another shove.

Nearly all France's imports are basic raw materials. Here's how the list

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Due to the time lag in reconversion of part of our factory at Marion, Virginia, part of the production of this plant is immediately available for manufacturing various wood products and reinforced plastics. Plant is modern and well-equipped, with complete facilities available for the mass production, fabricating, shaping, turning and finishing of all varieties of lumber and plywood, and for low-pressure molded wood and plastics processing in both laminated and solid form. Write, wire or phone

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Search your plant for this *idle* metal... work with your local scrap dealer to increase supplies of badly-needed iron and steel scrap.

What to look for...

obsolete machines, tools and equipment, no-longer-used jigs and fixtures, worn-out or broken chains, wheels, pulleys, gears, pipe, tanks, drums and abandoned metal structures. Non-ferrous is needed, too!



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breaks down: coal, \$150-million; cotton, \$125-million to \$140-million; petroleum products, \$125-million. On top of these France must buy nonferrous metals, especially copper, and newsprint. Moreover, it is likely that France will have to import U.S. wheat by next spring to fill the gap left by this year's poor crop.

• **Putting Pressure On**—It looks as if the French finance minister had overstated his case in a bid for bigger and faster American aid. For example, Mayer almost certainly underestimated France's probable dollar income through mid-1952. He left out the dollar income expectable from American orders of French-made military equipment, plus the sum that's likely to be transferred from the military to the economic aid category.

So far, no dollar allocation has been made to France from the mutual security funds. But Washington decided to give Paris an advance of \$100-million to \$200-million. Ultimately, economic aid to France may come to \$400-million—if there is that much to go around. That depends partly on how much Britain needs to meet its economic crisis.

France's economic troubles haven't yet hit the ordinary Frenchman with full force. But as the cost of living keeps going up, the wage increases of early 1951 look less and less adequate. True, there is still little unemployment in France, and no rationing. All in all, the French workers are better off than three years ago. But that isn't saying much.

This situation would change for the worse overnight if Mayer's dollar import cuts were actually put into effect. Unemployment would inevitably result. Workers' industrial earnings would drop, and so would the government's tax income. The resulting tide of political and social unrest would almost certainly sweep out the Plevin government, open the way to a rightist coalition headed by a Gaullist.

• **There'd Be Changes**—It's not completely clear yet what a Gaullist-dominated government would mean to Western defense policy. But you can be sure French foreign policy wouldn't be the same as it has been under Plevin and Schuman. De Gaulle already has denounced both the Schuman Plan for a European coal-steel pool and the Plevin Plan for a joint European army. The general has also severely criticized the North Atlantic Treaty Organization and U.S. aid policies. De Gaulle regards these as blows to French sovereignty.

• **Breakers Ahead**—No matter what aid comes from the U.S. in the next few weeks, Plevin is sure to get rough handling in the budget debate next month. Observers give him no more

than a 50-50 chance of pulling his government through intact. And if Plevin falls, it is unlikely that another middle-of-the-road leader could put center coalition together again.

State Dept. Weighs Oatis vs. Steel Mill

The possibility of swapping a \$17-million steel rolling mill to Czechoslovakia for the release of newspaperman William Oatis was given the "no comment" treatment by U.S. officials and businessmen this week. But that didn't scotch stories that a deal along those lines had reached the decision stage.

The mill—to produce sheet and light-weight plate—was ordered by the Czech Skoda works before the Communist takeover in 1948. Delivery was slated for last year, and the Czechs have paid about \$16-million. But they've never been able to get an export license for the mill.

• **Stalemate**—Right now the Czechs have neither the mill nor the \$16-million. But they do have Oatis in jail for "spying." And rumor has it that Prague has made an export permit the price for Oatis' freedom.

The Czechs first applied for an export permit in 1948; they tried again in 1949. Since then, there's been no official Czech request at the Office of International Trade, though private exporters make frequent, informal inquiries. The mill is now practically complete, save for some electrical equipment.

• **No Takers**—Since steel went under mobilization controls, the National Production Authority has tried to locate a U.S. buyer for the mill. There have been no takers. For one thing, the mill is wired for a 50-cycle current, would have to be revamped for the standard U.S. 60-cycle.

NPA officials say that, if the mill is going to be released to the Czechs, that's a State Dept. matter. But they will admit that efforts to dispose of it in the U.S. have failed. The United Engineering & Foundry Co., Pittsburgh, which built the mill, is not saying anything either—under instructions from Washington—but is supposed to be anxious that something be done with it pronto: The company hasn't yet been able to get its money out of the project.

The State Dept. is close-mouthed. All officials there will say is that there's no change in the mill's status or the export license. But they are actively considering its release—or at least the release of Prague's \$16-million if it can be sold—as a part of their effort to free Oatis.

"Minute Man" in MALAYA

THIS young Malayan soldier is guarding a strategic area. Not an arsenal, not an atom bomb plant—but, in its own way, just as important to the United States.

The "protected place" is a large rubber plantation in Malaya. Today, the freedom-loving people of Malaya are waging a bitter shooting war with hit-and-run Communist bandits who are bent on disrupting the country's vital natural rubber production.

Malaya supplies nearly half of the world's natural rubber. The lack of such rubber would affect the security of all the free nations.

In spite of the severe handicaps of trying to fight a jungle-hidden enemy, Malaya has succeeded in stemming the Communist tide. Malayan rubber production has been maintained. The rubber planter continues to work his rubber land, though it means risking his life every hour of the day and night.

In their fight against the Communists in Malaya, the people of this important Southeast Asian country are maintaining an outpost of freedom and democracy in the very shadow of the Iron Curtain.



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Philippines: Progress, But Not Enough

Things have picked up in a year, but basic troubles like land distribution persist. Huks on the run.

Like an anxious foster parent, the U.S. has been watching the awkward adolescence of the Philippine Republic. Just five and a half years ago the war-scarred islands gained their independence. One year ago they were tottering on the edge of political and economic bankruptcy.

• **Bell Report**—This fall the U.S. can breathe a little easier about its offspring. There has been solid progress since October a year ago, when a U.S. economic survey group—the Bell mission—made its dismal report of mismanagement and corruption in the islands (BW—Nov. 4 '50, p140). However, much remains to be done, especially in land reform, before you can look for real economic and social stability in the Philippines.

Here's a boxscore of the progress made since the Bell mission:

- Filipinos have just totted up the results of one of their first wholly honest, albeit turbulent, elections. The party in power, President Elpidio Quirino's Liberals, took a bad beating in the Senate.

- The Communist-led Huk rebels are being beaten at their own hit-and-run game.

- Industrial production and food

output are both rising; mineral output is improving month by month.

- Exports of copra, sugar, abaca, lumber, and metals are booming in both dollar value and volume. Foreign currency reserves are reasonably healthy, tax revenues have doubled over 1950.

On the face of it, the Philippine picture is better than at any time since the war. But outsiders, especially businessmen and foreign investors, are still dubious. To see why, you have to draw a distinction between cause and symptom, between fundamental cure and short-term remedies.

I. Huk Cleanup

If you look at the Huk rebellion as a cause, rather than a symptom, of the Philippines' woes, the government gets credit for a job well done. Thanks to the devoted, vigorous battling of Defense Secretary Ramon Magsaysay (you pronounce him mog-sigh-sigh), the rebels have been flushed out of areas where farm production had come to a dead stop.

Magsaysay has licked the Huks by a hard-headed adaptation of their own ruthless methods: disguise, surprise, in-

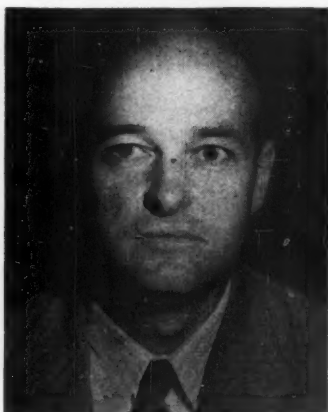
timidation, ambush. Handsome rewards for the capture of Huk bosses—as high as \$65,000—have turned up some prize catches, driven others into remote hideouts where they're relatively harmless.

- **Poor Get Poorer**—There are a lot of outside observers who think the Huk movement would have withered on the vine if it weren't for conditions that made it easy for Communist leaders to gather support. The story that the Bell report tersely related last year still stands in many areas: of the rich getting richer, and the poor, poorer; of fewer people grabbing off more of the best land; of landowners taking all the gravy from tenant's toil; and of disillusionment and despondency in the farm cottages.

The Bell mission advised the government to set about a program of land distribution—buying up big estates for resale to homesteaders. But powerful pressures generated by bigwig landowners have pretty well roadblocked this recommendation. Meanwhile, the food situation grows more serious: Today there are 25% more mouths to feed in the Philippines than there were 10 years ago, yet farm production is just where it was then. ECA and other agencies are doing what they can to push agricultural output and raise farmers' morale—but it isn't enough. Without a self-respecting and self-inter-



Kirk for Bonn?



Kennan for Moscow?



McGhee for Ankara?

Top U.S. Diplomats Get Set for Musical Chairs

Moving day is coming soon for some of the key U.S. embassies around the world.

The moves: Admiral Alan Kirk, Ambassador to Moscow, has the inside

track for the upcoming post at Bonn, the West German capital. George Kennan, State Dept. mastermind of the Soviet containment policy, is slated to take Kirk's place at the Kremlin.

George McGhee looks like a sure bet to take over the embassy at Ankara, Turkey. McGhee has been Asst. Secretary of State for Middle East and African affairs.

ested farm community there's little hope that crop volume will catch up with increased population.

II. Government and Business

Point Number One of the Bell recommendations underlined the need for putting government finances on a sound basis via higher tax returns. The Manila government has moved swiftly to push "soak the rich" tax laws. However, it has been hard to raise the efficiency of tax collections. Result: The extra revenue that is being raised mostly comes from wage and salary earners, whose employers act as tax collectors, and from importers who pass the buck to wholesalers and consumers.

Meantime, deficit piles on deficit. The Philippines have been saved from insolvency only by stopgap U.S. loans and by a temporary tax on foreign exchange sales.

• **Slow Deliveries**—The republic's industrialization program is being hobbled by lagging deliveries of U.S. equipment. For example, work has been delayed on the ECA-financed Maria Christina electric powerplant. Also delayed are a fertilizer plant, a bar and rolling mill, and expansion of Manila's power supply network.

Another thing holding up industrial development is the continued diversion of the bulk of local investment capital into speculation in commodities and real estate, where the profits are juiciest.

The shyness of local private capital in the industrial field has left major investment opportunities open to the government and to foreigners. The government has seized these opportunities only too readily, branching out into many lines of production.

In most cases the government has gone into business to pioneer industries from which private capital shied away for lack of confidence and experience. Government enterprises include spinning mills, electrical manufacturing, a shipping line, a wallboard factory, a shipyard and steel mill, a scientific research institute, a land settlement corporation, the Reconstruction Finance Corp., the Philippine National Bank, and utilities.

What really worries prospective foreign investors is the fickle political climate in the Philippines. Particularly troubling is the absence of law and order in some areas that would be natural sites for major undertakings in mining and food processing. Still worse is the sad experience met by established American firms in trying to transfer profits. They are still waiting for permission to transfer a portion of their 1949 profits. This has inspired little confidence in government assurances that safe-conduct would be given to profits of overseas firms as well as to

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their capital, if they wished to pull out.

It is no wonder, then, that new foreign investments during the first half of 1951 reached a figure of only \$400,000.

III. Lack of Diversity

The Filipinos' inability to gear their economy to a more varied pattern of production holds great danger for the not too distant future. In 1954 Philippine exports will start paying import duties in the U.S. The gradual scaling down of preferences and quotas will almost certainly entail a partial loss of dollar earnings at a time when the Philippines' ability to export may have expanded fully to American quota ceilings. No attempt has been made to develop a diversified system of international trade relations against this evil day. During the first half of this year, 67.34% of all overseas trade was with the U.S. The sugar producers, in particular, act as if they had a perpetual lease on the U.S. market and refuse to explore alternative outlets.

Further deflation in the world's commodity markets could bring the threatening trade crisis to a head much sooner. Already the balance of trade has tipped against the republic, and its dollar reserve is going through a new process of erosion despite continued checks on imports. A critical phase may be reached soon, should export prices dip below inflated production costs.

If world commodity prices ever go into a tailspin, currency devaluation probably would be the only way out for the Philippines.

BUSINESS ABROAD BRIEFS

India is due to get three big oil refineries built by Standard Vacuum, Caltex, and Burmah Shell at a cost of up to \$30-million apiece. Stanvac and Burmah have completed site surveys in the Bombay harbor area; Caltex is considering Madras.

Firestone-Phoenix, a new trademark for tires and tubes, will soon appear in West Germany. Firestone Tire & Rubber Co. and the Phoenix A. G. in Hamburg have agreed to exchange technical information and assistance. Phoenix plans to export part of its output.

Edmonton, Alberta, is in line for another big chemical plant. Canadian Industries, Ltd., Montreal, is thinking about a \$10-million project, has taken an option on 300 acres outside town. Edmonton is already the site of the huge (\$54-million) plant being built by Canadian Chemical Co., a Celanese Corp. of America affiliate.

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The Credit Control Pendulum Swings Back

Economic thinking, like the state of business, goes through cycles.

In raising the bank rate the other day, the Bank of England drove the nail in the coffin of the doctrine of "cheap-and-easy-money-under-all-conditions." Britain has finally decided to try again the old-fashioned idea of fighting inflation by making it harder and costlier for borrowers to get money (BW—Nov. 17 '51, p176).

Central bank control of credit as a means toward economic stability has had its ups and downs in the last 25 years. Before 1929 it was regarded as the magic device to govern the complex economic machine. The depression years of the '30s brought it into discredit. Easy credit failed to revive our economy. It was like "pushing on a piece of string." Emphasis shifted to fiscal policy, to government measures for increasing actual spending. Through the war years cheap money persisted as an adjunct of government deficit financing in all the warring nations.

At warend most governments expected a sharp price collapse. Only a few—such as Belgium, Denmark, and the Netherlands—took the hard road of reducing their money supplies, ballooned by war finance. In various countries further credit expansion increased the quantity of money. To deal with this, governments resorted to keeping, and even tightening, elaborate systems of direct controls over prices, wages, materials, and foreign trade.

Mounting evidence that direct controls couldn't really neutralize swollen money supplies has led to reviving interest in the monetary approach to inflation control—that is, making it harder and costlier to borrow money. Korea really cleared the air. The demand for guns, now layered over the tight economies of the West, seems to have convinced these nations that tougher, more fundamental action to deal with inflation is required. The most obvious evidence of a change of heart (or at least of tactics) has been the boosting of discount rates. Since Korea, this has taken place in Belgium, Canada, Denmark, Finland, Germany, the Netherlands, and Sweden, and most recently in Britain and France. Since commercial bank loan rates are based on the central bank rate in these countries, this has meant costlier loans, and they have been harder to get.

In our own country the "full accord" agreement between the Federal Reserve and the Treasury last March was in step with this development. Long-term government bond prices were unpegged, and the Federal Reserve discount rate was raised.

Cheap and easy money in this country still has powerful advocates. There is evidence that the Treasury's devotion to this doctrine is changing a little, but the President's Council of Economic Advisers is still on

record that "low interest rates are always desirable."

It wants to "retain the advantage of cheap money and adopt other measures to curb inflationary forces." More recently, the chairman of the CEA has argued that general tightening up of credit that resulted in higher interest rates now is bad because we are trying to increase all kinds of production. The flaw in that logic is that, with the present shortages of materials, cheap money cannot help manufacture anything but inflation.

Recent recourse to monetary and credit controls both here and in Europe reflects a well-grounded belief that these traditional weapons have some validity. This is a healthy swing of the pendulum. Obviously, these measures are no panacea now anymore than they ever were. They operate in a very different context from that of 25 years ago. But they have a vital role to play.

We should be on guard against attempts to discredit credit controls again. One such threat looms in the upcoming Congressional investigation into the relations between the Federal Reserve System and the Treasury. If Rep. Wright Patman (D., Texas), who heads the group, has his way, the hearings will be another TNEC farce. Patman's cheap and easy money bias is well known. It's the job of his fellow committeemen, who fortunately include Sen. Paul Douglas (D., Ill.), and of interested citizens to keep this investigation under strict surveillance. It must not be permitted to deteriorate into a propaganda show to discredit monetary and credit controls and to put the Federal Reserve System under the thumb of the Treasury.

Mine That Scrap!

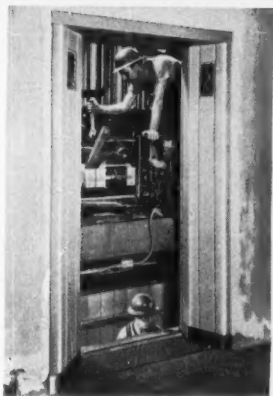
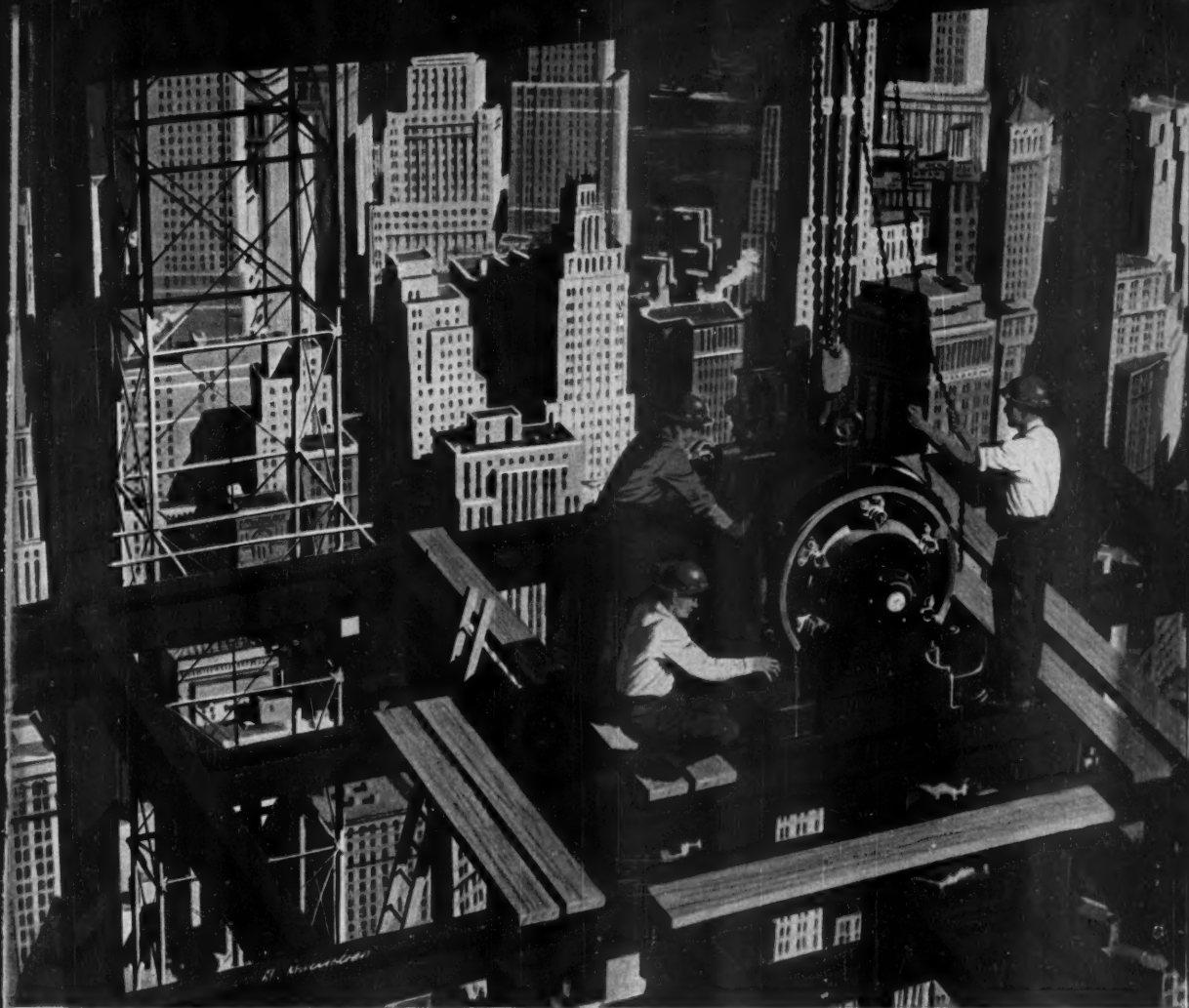
Need steel and can't get it? Maybe you're sitting on a mine of a vital raw material—scrap.

Ordinarily, the waste material trade shoves the scrap along, but these times aren't ordinary. Armament and industry both cry for steel; both protest that the steel mills can't be allowed any winter drop in production because scrap is scarce. The National Production Authority warns that tonnage isn't reaching furnaces fast enough. It may do something about it.

Collection by force is one way, but a bad one. It gets everybody's back up. Collection by cooperation is a better way.

Getting scrap back to furnaces fast helps everyone. For example, Larus & Brother Tobacco Co. of Virginia cleaned out its scrap, got paid for it, regained the use of 10,000 feet of floor space.

This is the kind of activity that the scrap drive needs. Responsible executives will put on their consciences—a regular tour of yards and buildings to hunt out scrap that's rusting.



AN ELEVATOR SKILL YOU'LL NEVER MATCH

We mean elevator construction skill. Something that's acquired on open steelwork. In 2 to 80-floor hoistways. In lofty machine rooms. It calls for men with an unusual combination of skills—those of a rigger, ironworker, machinist, electrician, carpenter, sheet metal worker. Basic skills *plus* long Otis training: Studying elevator parts, assemblies, functions; construction procedures; final testing and adjusting.

Otis construction skill *delivers* the promise that forms the basis of every Otis contract—the *world's finest elevating!* A promise that is not considered fulfilled until Otis headquarters

has approved the field engineer's final report.

You'll find that Otis construction skill is available everywhere. No job is too small, too big, too far. Some 4,000 elevator constructors and helpers and 100 elevator field engineers are on call for construction and service through 263 Otis offices.

Add Otis *elevator* construction to Otis *elevator* research, planning, engineering, manufacturing and service and you have six reasons why the Otis trade-mark is the symbol of the world's finest elevators and escalators. Otis Elevator Company, 260 11th Ave., New York 1, N. Y.

BETTER ELEVATORING IS THE BUSINESS OF



REG. U. S. PAT. OFF.



Wood's so good for so much

FROM CURLICUES in a little girl's hair to the dream home she'll have some day, wood serves us all throughout our lives.

But even versatile wood needs an assist in meeting *all* the needs of modern life . . . and that's where Monsanto Chemistry comes in. Two quick examples:

✓ Monsanto glues provide chemical bonds for plywood, huge laminated beams and long-span arches, many parts of prefabricated structures . . . get more good out of wood

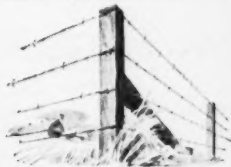
that would otherwise be wasted.

✓ Lumber, posts and poles give added years of service when protected against termites and rot with solutions of Monsanto's "penta." Much of the millwork in residential and commercial buildings is also "penta"-treated for longer life, greater usefulness.

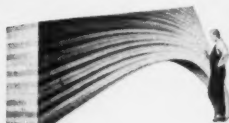
Wood, always good, is good for so much more when it gets the chemical assists listed at the right. Monsanto Chemical Company, St. Louis 4, Missouri. In Canada: Monsanto (Canada) Limited, Montreal and Vancouver.

Lumber, Wood and Defense

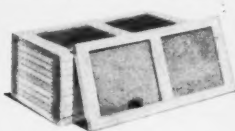
Since wood and lumber are so important to current defense efforts, any assistance contributed by chemicals to this versatile structural material is of particular significance now.



Poles and Posts last many years longer when treated with solutions of Monsanto Penta (pentachlorophenol)—they are protected against termites and rot. Monsanto Penta is chemically constant; its toxicity is always the same, always powerful. Doesn't leach out.



Laminated Beams, bonded with Monsanto glues, provide strength, economy, unusual design and working flexibility. There are many other wood-bonding applications for Monsanto glues—melamine, phenolic, resorcinol and urea-resin adhesives; soybean and casein glues.



Granulated Wood—mixed with Monsanto Resinox® phenolic or Lauxite® urea resins—is molded into usable shapes and sheets. The finished product is moisture-resistant and has all the desirable properties of wood.

GET MORE INFORMATION . . . If you are a manufacturer of lumber or wood products, additional information on any of the following chemical applications will be sent on request. Please check:

Penta, wood preservative for ☐ Poles, crossarms, ☐ Lumber, ☐ Heavy timbers, ☐ Farm structures, posts . . . ☐ Plywood glues . . . ☐ Furniture glues . . . ☐ Resinox phenolic and Lauxite urea resins for bonding granulated wood . . . ☐ Laux Rez® clear resin primer and sealer, for dimensional stability . . . ☐ Santobrite® for sap-stain control.

*Reg. U. S. Pat. Off.



Serving Industry . . . Which Serves Mankind